

Glens Falls NY – Proposed Meeting Agenda

Hercules/Ciba - Site No. 557011

Thursday April 7, 2016 @ 9:00 AM in Albany NY

Expected Attendees:

- NYSDEC: Brian Jankauskas, John Swartwout, Jim Harrington, Rebecca Quail
- Ashland: Jim Vondracek, Gary Long, Arlene Lillie
- BASF: Steve Havlik, Laura McMahon, Tamara Sorell, Jeff Caputi

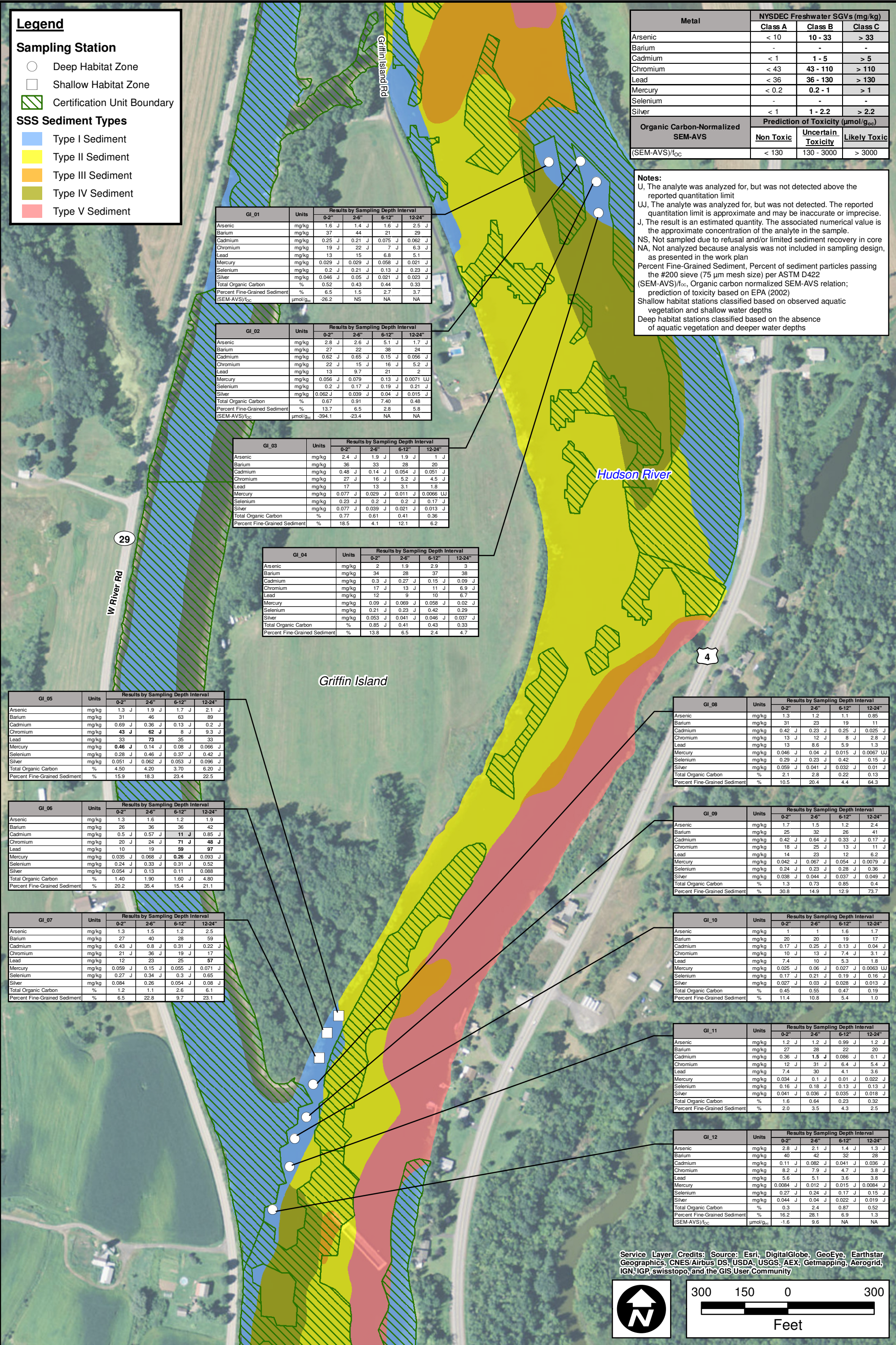
Meeting Objectives:

- Review off-site sediment characterization sampling results – October 2015
- Present key findings and discuss path forward to finalize the Part 1 Fish and Wildlife Resource Impact Analysis (FWRIA)
- Review reporting schedule

Proposed Agenda:

- October 2015 Off-Site Sediment Characterization Sampling Data Review
 - Investigation objectives:
 - Characterize concentrations of preliminary constituents of ecological concern (pCECs) in relevant sediment exposure intervals within identified focus areas to assess whether further evaluation of potential impacts to fish and wildlife resources is warranted.
 - Assess the depth of the sediment biologically active zone (BAZ) based on site-specific observations of biological activity using a combination of sediment profile imagery (SPI) and supplemental visual examination.
 - Further characterize the distribution of metals in sediment consistent with DER-10 to supplement the RFI for off-site sediments.
 - Site-Specific Biologically Active Zone (BAZ) Assessment
 - SPI survey results
 - Supplemental visual examination results
 - Key findings of the site-specific BAZ assessment as related to the conceptual exposure model for the FWRIA
 - Analytical Sampling Results
 - Analytical results by Focus Area (Griffin Island and Lock #6)
 - Description of substrate characteristics
 - Distribution of pCEC concentrations in sediment cores
 - Preliminary screening of pCECs by habitat zone
 - Preliminary bioavailability assessment results
 - Findings and recommendations for the FWRIA path forward
- Open discussion of results and path forward to finalize FWRIA
- FWRIA Reporting Schedule
 - April 7, 2016 – NYSDEC meeting to review data
 - May 15, 2016 – FWRIA Part 1 Report submittal to NYSDEC
- Adjourn

ANALYTICAL DATA POSTING MAPS



GI_06

Units

Results by Sampling Depth Interval

0-2"

2-6"

6-12"

12-24"

Arsenic

mg/kg

1.3

1.6

1.2

1.9

Barium

mg/kg

26

36

36

42

Cadmium

mg/kg

0.5 J

0.57 J

11 J

0.85 J

Chromium

mg/kg

20 J

24 J

71 J

48 J

Lead

mg/kg

10

19

59

97

Mercury

mg/kg

0.035 J

0.068 J

0.26 J

0.093 J

Selenium

mg/kg

0.24 J

0.33 J

0.31 J

0.52

Silver

mg/kg

0.054 J

0.13

0.11

0.088

Total Organic Carbon

%

1.40

1.90

1.60 J

4.80

Percent Fine-Grained Sediment

%

20.2

35.4

15.4

21.1

GI_07

Units

Results by Sampling Depth Interval

0-2"

2-6"

6-12"

12-24"

Arsenic

mg/kg

1.3

1.5

1.2

2.5

Barium

mg/kg

27

40

28

59

Cadmium

mg/kg

0.43 J

0.8 J

0.31 J

0.22 J

Chromium

mg/kg

21 J

36 J

19 J

17

Lead

mg/kg

12

23

25

57

Mercury

mg/kg

0.059 J

0.15 J

0.055 J

0.071 J

Selenium

mg/kg

0.27 J

0.34 J

0.3 J

0.65

Silver

mg/kg

0.084

0.26

0.054 J

0.08 J

Total Organic Carbon

%

1.2

1.1

2.6

6.1

Percent Fine-Grained Sediment

%

6.5

22.8

9.7

23.1

GI_08

Units

Results by Sampling Depth Interval

0-2"

2-6"

6-12"

12-24"

Arsenic

mg/kg

1.3

1.2

1.1

0.85

Barium

mg/kg

31

23

19

11

Cadmium

mg/kg

0.42 J

0.23 J

0.25 J

0.025 J

Chromium

mg/kg

13 J

12 J

8 J

2.8 J

Lead

mg/kg

13

8.6

5.9

1.3

Mercury

mg/kg

0.046 J

0.04 J

0.015 J

0.0067 UJ

Selenium

mg/kg

0.29 J

0.23 J

0.42

0.15 J

Silver

mg/kg

0.059 J

0.041 J

0.032 J

0.01 J

Total Organic Carbon

%

2.1

2.8

0.22

0.13

Percent Fine-Grained Sediment

%

10.5

20.4

4.4

64.3

GI_09

Units

Results by Sampling Depth Interval

0-2"

2-6"

6-12"

12-24"

Arsenic

mg/kg

1.7

1.5

1.2

2.4

Barium

mg/kg

25

32

26

41

Cadmium

mg/kg

0.42 J

0.64 J

0.33 J

0.17 J

Chromium

mg/kg

18 J

25 J

13 J

11 J

Lead

mg/kg

14

23

12

6.2

Mercury

mg/kg

0.042 J

0.067 J

0.054 J

0.0079 J

Selenium

mg/kg

0.24 J

0.23 J

0.28 J

0.36

Silver

mg/kg

0.038 J

0.044 J

0.037 J

0.049 J

Total Organic Carbon

%

1.3

0.73

0.85

0.4

Percent Fine-Grained Sediment

%

30.8

14.9

12.9

73.7

GI_10

Units

Results by Sampling Depth Interval

0-2"

2-6"

6-12"

12-24"

Arsenic

mg/kg

1

1

1.6

1.7

Barium

mg/kg

20

20

19

17

Cadmium

mg/kg

0.17 J

0.25 J

0.13 J

0.04 J

Chromium

mg/kg

10 J

13 J

7.4 J

3.1 J

Lead

mg/kg

7.4

10

5.3

1.8

Mercury

mg/kg

0.025 J

0.06 J

0.027 J

0.0063 UJ

Selenium

mg/kg

0.17 J

0.21 J

0.19 J

0.16 J

Silver

mg/kg

0.027 J

0.03 J

0.028 J

0.013 J

Total Organic Carbon

%

0.45

0.55

0.47

0.19

Percent Fine-Grained Sediment

%

11.4

10.8

5.4

1.0

GI_11

Units

Results by Sampling Depth Interval

0-2"

2-6"

6-12"

12-24"

Arsenic

mg/kg

1.2 J

1.2 J

0.99 J

1.2 J

Barium

mg/kg

27

26

22

20

Cadmium

mg/kg

0.36 J

1.5 J

0.086 J

0.1 J

Chromium

mg/kg

12 J

31 J

6.4 J

5.4 J

Lead

mg/kg

7.4

30

4.1

3.6

Mercury

mg/kg

0.034 J

0.1 J

0.01 J

0.022 J

Selenium

mg/kg

0.16 J

0.18 J

0.13 J

0.13 J

Silver

mg/kg

0.041 J

0.036 J

0.035 J

0.018 J

Total Organic Carbon

%

1.6

0.64

0.23

0.32

Percent Fine-Grained Sediment

%

2.0

3.5

4.3

2.5

GI_12

Units

Results by Sampling Depth Interval

0-2"

2-6"

6-12"

12-24"

Arsenic

mg/kg

2.8 J

2.1 J

1.4 J

1.3 J

Barium

mg/kg

40

42

32

28

Cadmium

mg/kg

0.11 J

0.082 J

0.041 J

0.036 J

Chromium

mg/kg

8.2 J

7.9 J

4.7 J

3.8 J

Lead

mg/kg

5.6

5.1

3.6

3.8

Mercury

mg/kg

0.0084 J

0.012 J

0.015 J

0.0084 J

Selenium

mg/kg

0.27 J

0.24 J

0.17 J

0.15 J

Silver

mg/kg

0.044 J

0.04 J

0.022 J

0.019 J

Total Organic Carbon

%

0.3

2.4

0.87

0.52

Percent Fine-Grained Sediment

(SEM-AVS)/_{foc}

μmol/g_{oc}

16.2

28.1

6.9

1.3

(SEM-AVS)/_{foc}

μmol/g_{oc}

-1.6

9.6

NA

NA

Notes:

U, The analyte was analyzed for, but was not detected above the reported quantitation limit

UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

NS, Not sampled due to refusal and/or limited sediment recovery in core

NA, Not analyzed because analysis was not included in sampling design, as presented in the work plan

Percent Fine-Grained Sediment, Percent of sediment particles passing the #200 sieve (75 μm mesh size) per ASTM D422

(SEM-AVS)/_{foc}, Organic carbon normalized SEM-AVS relation; prediction of toxicity based on EPA (2002)

Shallow habitat stations classified based on observed aquatic vegetation and shallow water depths

Deep habitat stations classified based on the absence of aquatic vegetation and deeper water depths

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N

300

150

0

300

Feet

EHS Support

consider it done

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GLENS FALLS, NEW YORK

OCTOBER 2015 SEDIMENT

GRIFFIN ISLAND SAMPLING RESULTS

FIGURE 1

DRAFT

Legend

Sampling Station

- Deep Habitat Zone
- Shallow Habitat Zone
- ▨ Certification Unit Boundary
- SSS Sediment Types
 - Type I Sediment
 - Type II Sediment
 - Type III Sediment
 - Type IV Sediment
 - Type V Sediment

Metal	NYSDEC Freshwater SGVs (mg/kg)		
	Class A	Class B	Class C
Arsenic	< 10	10 - 33	> 33
Barium	-	-	-
Cadmium	< 1	1 - 5	> 5
Chromium	< 43	43 - 110	> 110
Lead	< 36	36 - 130	> 130
Mercury	< 0.2	0.2 - 1	> 1
Selenium	-	-	-
Silver	< 1	1 - 2.2	> 2.2
Organic Carbon-Normalized SEM-AVS	Prediction of Toxicity (μmol/g _{OC})		
	Non Toxic	Uncertain Toxicity	Likely Toxic
(SEM-AVS)/f _{OC}	< 130	130 - 3000	> 3000

Notes:
U, The analyte was analyzed for, but was not detected above the reported quantitation limit
UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NS, Not sampled due to refusal and/or limited sediment recovery in core
NA, Not analyzed because analysis was not included in sampling design, as presented in the work plan
Percent Fine-Grained Sediment, Percent of sediment particles passing the #200 sieve (75 μm mesh size) per ASTM D422
(SEM-AVS)/f_{OC}, Organic carbon normalized SEM-AVS relation; prediction of toxicity based on EPA (2002)
Shallow habitat stations classified based on observed aquatic vegetation and shallow water depths
Deep habitat stations classified based on the absence of aquatic vegetation and deeper water depths

L6_01	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	3 J	3 J	3.1	2.5 J
Barium	mg/kg	97	97	99	71
Cadmium	mg/kg	1.5 J	1.3 J	1.4	1.9 J
Chromium	mg/kg	35 J	36 J	40	56 J
Lead	mg/kg	46	46	47	53
Mercury	mg/kg	0.18 J	0.19 J	0.18	0.3 J
Selenium	mg/kg	0.56 J	0.59 J	0.65	0.45 J
Silver	mg/kg	0.18 J	0.19 J	0.21 J	0.16 J
Total Organic Carbon	%	3.9	3.5	3.5	3.7
Percent Fine-Grained Sediment	%	83.5	82.5	86.2	76.0
(SEM-AVS)/f _{OC}	μmol/g _{OC}	36.2	33.3	NA	NA

L6_02	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	3.2 J	2.5 J	2.8 J	2.6
Barium	mg/kg	71	58	61	57
Cadmium	mg/kg	1.1 J	1.1 J	1.6	1.9 J
Chromium	mg/kg	33 J	33 J	68 J	62 J
Lead	mg/kg	38	38	76	54
Mercury	mg/kg	0.17 J	0.13 J	0.25 J	0.34 J
Selenium	mg/kg	0.48 J	0.38 J	0.44 J	0.38 J
Silver	mg/kg	0.16 J	0.12 J	0.16 J	0.14 J
Total Organic Carbon	%	3.2	3.1	3.9	3.8
Percent Fine-Grained Sediment	%	59.1	41.4	27.6	42.4
(SEM-AVS)/f _{OC}	μmol/g _{OC}	-76.2	-131.3	NA	NA

L6_03	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.2 J	2.1 J	NS	NS
Barium	mg/kg	45	58	NS	NS
Cadmium	mg/kg	7.1 J	6.3 J	NS	NS
Chromium	mg/kg	36 J	100 J	NS	NS
Lead	mg/kg	41	110	NS	NS
Mercury	mg/kg	0.13 J	1 J	NS	NS
Selenium	mg/kg	0.37	0.4	NS	NS
Silver	mg/kg	0.079	0.46 J	NS	NS
Total Organic Carbon	%	1.5	3.2	NS	NS
Percent Fine-Grained Sediment	%	18.8	29.8	NS	NS
(SEM-AVS)/f _{OC}	μmol/g _{OC}	77.0	7.1	NA	NA

L6_04	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	3.2 J	2.9 J	3.4 J	1.8 J
Barium	mg/kg	69	52	83	33
Cadmium	mg/kg	1.1 J	0.99 J	0.41 J	0.078 J
Chromium	mg/kg	39 J	38 J	19 J	6.2 J
Lead	mg/kg	37	38	45	12
Mercury	mg/kg	0.13 J	0.17 J	0.19 J	0.033 J
Selenium	mg/kg	0.52 J	0.38 J	0.51 J	0.15 J
Silver	mg/kg	0.12	0.13	0.086 J	0.021 J
Total Organic Carbon	%	3.2	2.4	4.6	0.48
Percent Fine-Grained Sediment	%	57.9	33.9	24.6	34.2

L6_05	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.2 J	2.9 J	2.2 J	1.1 J
Barium	mg/kg	38	65	48	22
Cadmium	mg/kg	1.4 J	3 J	0.23 J	0.038 J
Chromium	mg/kg	61 J	89 J	15 J	4.2
Lead	mg/kg	98	280	45	3
Mercury	mg/kg	0.18 J	0.33 J	0.11 J	0.014 J
Selenium	mg/kg	0.35 J	0.64	0.41 J	0.19 J
Silver	mg/kg	0.17	0.37	0.083 J	0.016 J
Total Organic Carbon	%	3.9	7.7	5.1	0.45
Percent Fine-Grained Sediment	%	27.9	39.8	30.7	4.7

L6_07	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.4 J	1.9 J	2.4 J	2.2 J
Barium	mg/kg	57	56	130	51
Cadmium	mg/kg	1.3 J	3.2 J	40 J	2.1 J
Chromium	mg/kg	44 J	60 J	610 J	380 J
Lead	mg/kg	35	55	610	310
Mercury	mg/kg	0.16 J	1.2 J	8.4 J	0.75 J
Selenium	mg/kg	0.47 J	0.45 J	0.74	0.55 J
Silver	mg/kg	0.14	0.22	0.55	0.27
Total Organic Carbon	%	3.3	5.3	9.2	12
Percent Fine-Grained Sediment	%	48.7	29.5	56.1	24.2
(SEM-AVS)/f _{OC}	μmol/g _{OC}	-117.0	-127.4	NA	NA

L6_09	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2 J	1.1 J	1.7 J	1.1 J
Barium	mg/kg	29	23	25	18
Cadmium	mg/kg	0.29 J	0.11 J	0.12 J	0.055 J
Chromium	mg/kg	16 J	11 J	11 J	4.1 J
Lead	mg/kg	14	9.8	9	3.4
Mercury	mg/kg	0.055 J	0.024 J	0.017 J	0.0094 J
Selenium	mg/kg	0.22 J	0.19 J	0.19 J	0.14 J
Silver	mg/kg	0.044 J	0.028 J	0.023 J	0.015 J
Total Organic Carbon	%	4.3	0.36	0.27	0.12
Percent Fine-Grained Sediment	%	11.3	2.8	0.5	1.7

L6_12	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	1.4 J	NS	NS	NS
Barium	mg/kg	31	NS	NS	NS
Cadmium	mg/kg	0.23 J	NS	NS	NS
Chromium	mg/kg	15 J	NS	NS	NS
Lead	mg/kg	12	NS	NS	NS
Mercury	mg/kg	0.041 J	NS	NS	NS
Selenium	mg/kg	0.2 J	NS	NS	NS
Silver	mg/kg	0.023 J	NS	NS	NS
Total Organic Carbon	%	1.2 J	NS	NS	NS
Percent Fine-Grained Sediment	%	10.6	NS	NS	NS

L6_08	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	1.7 J	1.5 J	NS	NS
Barium	mg/kg	41	29	NS	NS
Cadmium	mg/kg	0.37 J	0.19 J	NS	NS
Chromium	mg/kg	23 J	17 J	NS	NS
Lead	mg/kg	18	13	NS	NS
Mercury	mg/kg	0.08 J	0.038 J	NS	NS
Selenium	mg/kg	0.29 J	0.22 J	NS	NS
Silver	mg/kg	0.064 J	0.046 J	NS	NS
Total Organic Carbon	%	4.1	2.5	NS	NS
Percent Fine-Grained Sediment	%	NS	5.2	NS	NS

L6_06	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.9 J	2.7 J	2	2.1 J
Barium	mg/kg	42	41	54	66
Cadmium	mg/kg	0.84 J	1.1 J	4.3 J	1.8 J
Chromium	mg/kg	33 J	48 J	52	59 J
Lead	mg/kg	31	44	36	48
Mercury	mg/kg	0.088 J	0.2 J	0.14 J	0.43 J
Selenium	mg/kg	0.4 J	0.38 J	0.47	0.47 J
Silver	mg/kg	0.12	0.12 J	0.16	0.25
Total Organic Carbon	%	3.4	3.5	3.8	4.3
Percent Fine-Grained Sediment	%	39.0	33.0	45.3	59.3

L6_10	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.2 J	2.3 J	2.3 J	1.1 J
Barium	mg/kg	52	48	44	35
Cadmium	mg/kg	3.2 J	1.3 J	1.3 J	2.2 J
Chromium	mg/kg	70 J	47 J	53 J	30 J
Lead	mg/kg	66	44	38	23
Mercury	mg/kg	0.3 J	0.15 J	0.63 J	0.11 J
Selenium	mg/kg	0.41 J	0.38 J	0.41 J	0.27 J
Silver	mg/kg	0.11	0.075 J	0.092	0.053 J
Total Organic Carbon	%	5.4	5.7	5.7	2.8
Percent Fine-Grained Sediment	%	24.5	19.8	13.6	17.7
(SEM-AVS)/f _{OC}	μmol/g _{OC}	18.7	1.2	NA	NA

L6_11	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	5.1 J	1.8 J	2.9 J	3.8 J
Barium	mg/kg	98	40	28	36
Cadmium	mg/kg	3.7	1.4 J	0.12 J	0.24 J
Chromium	mg/kg	100 J	41 J	16 J	23 J
Lead	mg/kg	76	34	16	23
Mercury	mg/kg	0.39	0.065 J	0.028 J	0.032 J
Selenium	mg/kg	0.85 J	0.3 J	0.21 J	0.28
Silver	mg/kg	0.26	0.12	0.024 J	0.026 J
Total Organic Carbon	%	7.6	0.88	0.3	0.4
Percent Fine-Grained Sediment	%	54.7	10.6	2.4	4.9

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



FORMER CIBA-GEIGY FACILITY
GLENS FALLS, NEW YORK

OCTOBER 2015 SEDIMENT
LOCK #6 SAMPLING RESULTS

FIGURE 2
DRAFT

Legend

Sampling Station

- Deep Habitat Zone
- Shallow Habitat Zone
- ▨ Certification Unit Boundary

SSS Sediment Types

- Type I Sediment
- Type II Sediment
- Type III Sediment
- Type IV Sediment
- Type V Sediment

L6_13	Units	Results by Sampling Depth Interval				
		0-2"	2-6"	6-12"	12-18"	18-24"
Arsenic	mg/kg	2.3 J	2.6 J	2.7 J	4.1 J	3.8 J
Barium	mg/kg	57	57	68	60	77
Cadmium	mg/kg	5.7 J	6.8 J	6.8 J	0.54 J	0.12 J
Chromium	mg/kg	170 J	220 J	400 J	78 J	18 J
Lead	mg/kg	130	180	290	96	14
Mercury	mg/kg	0.53 J	0.97 J	1.1 J	0.15 J	0.045 J
Selenium	mg/kg	0.52	0.59	0.61	0.53	0.35
Silver	mg/kg	0.24	0.24	0.33	0.11	0.046 J
Total Organic Carbon	%	2.6	4.4	5.7	3.7 J	0.50
Percent Fine-Grained Sediment	%	47.1	53.2	53.7	28.7	NS
(SEM-AVS)/f _{OC}	μmol/g _{OC}	33.8	7.4	NA	NA	NA

L6_14	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.2 J	4.2 J	1.2 J	2.1 J
Barium	mg/kg	38	41	38	45
Cadmium	mg/kg	0.59 J	0.3 J	1.9 J	2.6 J
Chromium	mg/kg	21 J	16 J	47 J	50 J
Lead	mg/kg	16	17	38	44
Mercury	mg/kg	0.047 J	0.073 J	0.13 J	0.33 J
Selenium	mg/kg	0.25 J	0.35 J	0.3 J	0.32 J
Silver	mg/kg	0.068 J	0.056 J	0.18	0.13
Total Organic Carbon	%	1	0.44	1.5	1.8
Percent Fine-Grained Sediment	%	34.2	51.7	13.1	10.7

L6_16	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.9 J	5.3 J	0.89	0.92
Barium	mg/kg	41 J	42 J	17	12
Cadmium	mg/kg	0.63 J	0.43 J	0.055 J	0.024 J
Chromium	mg/kg	58 J	35 J	8.4	2.7
Lead	mg/kg	59	40	6.2	1.7
Mercury	mg/kg	0.086 J	0.062 J	0.016 J	0.0069 UJ
Selenium	mg/kg	0.3 J	0.37 J	0.15 J	0.095 J
Silver	mg/kg	0.09 J	0.058 J	0.0085 J	0.0024 U
Total Organic Carbon	%	2.2	1.8	0.52	0.11 J
Percent Fine-Grained Sediment	%	15.5	14.0	4.9	1.8
(SEM-AVS)/f _{OC}	μmol/g _{OC}	18.8	71.3	NA	NA

L6_20	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.8	2.1	1.1	1.8
Barium	mg/kg	73	56	35	43
Cadmium	mg/kg	2.5 J	2.9 J	1.5 J	2.1 J
Chromium	mg/kg	63	62	43	85
Lead	mg/kg	57	53	40	110
Mercury	mg/kg	0.35 J	0.33 J	0.19 J	0.37 J
Selenium	mg/kg	0.38 J	0.33 J	0.24 J	0.29 J
Silver	mg/kg	0.12	0.24	0.14	0.13
Total Organic Carbon	%	2.3	2.8	3.2	4.5
Percent Fine-Grained Sediment	%	64.3	35.9	12.6	11.7

L6_22	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	3	2.9	2.4	2.7
Barium	mg/kg	63	68	63	65
Cadmium	mg/kg	1.4 J	2.1 J	1.7 J	3 J
Chromium	mg/kg	44	59	37	57
Lead	mg/kg	39	52	28	48
Mercury	mg/kg	0.12 J	0.2 J	0.21 J	0.23 J
Selenium	mg/kg	0.4 J	0.42 J	0.31 J	0.43 J
Silver	mg/kg	0.095	0.12	0.11	0.17
Total Organic Carbon	%	2.1	2.5	2.1	2.6
Percent Fine-Grained Sediment	%	58.8	57.4	67.4	67.3
(SEM-AVS)/f _{OC}	μmol/g _{OC}	136.4	34.9	NA	NA

Metal	NYSDEC Freshwater SGVs (mg/kg)		
	Class A	Class B	Class C
Arsenic	< 10	10 - 33	> 33
Barium	-	-	-
Cadmium	< 1	1 - 5	> 5
Chromium	< 43	43 - 110	> 110
Lead	< 36	36 - 130	> 130
Mercury	< 0.2	0.2 - 1	> 1
Selenium	-	-	-
Silver	< 1	1 - 2.2	> 2.2
Organic Carbon-Normalized SEM-AVS	Prediction of Toxicity (μmol/g _{OC})		
	Non Toxic	Uncertain Toxicity	Likely Toxic
(SEM-AVS)/f _{OC}	< 130	130 - 3000	> 3000

Notes:
U, The analyte was analyzed for, but was not detected above the reported quantitation limit
UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NS, Not sampled due to refusal and/or limited sediment recovery in core
NA, Not analyzed because analysis was not included in sampling design, as presented in the work plan
Percent Fine-Grained Sediment, Percent of sediment particles passing the #200 sieve (75 μm mesh size) per ASTM D422
(SEM-AVS)/f_{OC}, Organic carbon normalized SEM-AVS relation; prediction of toxicity based on EPA (2002)
Shallow habitat stations classified based on observed aquatic vegetation and shallow water depths
Deep habitat stations classified based on the absence of aquatic vegetation and deeper water depths

L6_15	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.2 J	2.3 J	2.2 J	1.7 J
Barium	mg/kg	49	37	40	46
Cadmium	mg/kg	2.3 J	0.54	1.3 J	1.5 J
Chromium	mg/kg	30 J	32	34 J	48 J
Lead	mg/kg	23	25	29	42
Mercury	mg/kg	0.098 J	0.078	0.11 J	0.27 J
Selenium	mg/kg	0.36 J	0.25 J	0.33 J	0.43 J
Silver	mg/kg	0.073 J	0.038 J	0.2	0.12
Total Organic Carbon	%	1.7 J	2.6	6.6	5.4
Percent Fine-Grained Sediment	%	40.1	35.9	26.9	41.3

L6_17	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.5	2.7	2.2	1.8
Barium	mg/kg	48	64	62	55
Cadmium	mg/kg	1.6 J	5.8 J	4.4 J	3.4 J
Chromium	mg/kg	58	110	130	91
Lead	mg/kg	47	120	130	83
Mercury	mg/kg	0.25 J	0.34 J	0.34 J	0.51 J
Selenium	mg/kg	0.32 J	0.51 J	0.49 J	0.38 J
Silver	mg/kg	0.086 J	0.18	0.17	0.15
Total Organic Carbon	%	5.5	8.7	15	8.4
Percent Fine-Grained Sediment	%	40.8	24.5	22.5	32.7

L6_18	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-15"
Arsenic	mg/kg	3.2	3.3	3.6	3.3
Barium	mg/kg	74	63	75	68
Cadmium	mg/kg	1.4 J	1.4 J	12 J	3.8 J
Chromium	mg/kg	23	48	160	96
Lead	mg/kg	20	49	180	90
Mercury	mg/kg	0.072 J	0.16 J	0.72 J	0.39 J
Selenium	mg/kg	0.39 J	0.38 J	0.59 J	0.47 J
Silver	mg/kg	0.074 J	0.085 J	0.25	0.16
Total Organic Carbon	%	1.9	3.2	5.6	3.8
Percent Fine-Grained Sediment	%	84.5	63.3	62.2	NS

L6_19	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	2.8	4.1	3.1	1.7
Barium	mg/kg	64	65	66	41
Cadmium	mg/kg	0.23	0.4 J	0.79 J	0.88 J
Chromium	mg/kg	15	22	28	23
Lead	mg/kg	12	20	26	27
Mercury	mg/kg	0.042	0.063 J	0.094 J	0.086 J
Selenium	mg/kg	0.29 J	0.32 J	0.46 J	0.29 J
Silver	mg/kg	0.043 J	0.052 J	0.12	0.089
Total Organic Carbon	%	1.9	1.7	2	1.7
Percent Fine-Grained Sediment	%	71.3	34.6	56.3	30.4

L6_21	Units	Results by Sampling Depth Interval			
		0-2"	2-6"	6-12"	12-24"
Arsenic	mg/kg	3.6	3.6	3	3
Barium	mg/kg	83	73	70	82
Cadmium	mg/kg	0.29 J	2 J	2 J	0.26 J
Chromium	mg/kg	21	68	45	17
Lead	mg/kg	16	67	43	15
Mercury	mg/kg	0.043 J	0.32 J	0.15 J	0.054 J
Selenium	mg/kg	0.36 J	0.39 J	0.42 J	0.47 J
Silver	mg/kg	0.051 J	0.24	0.072 J	0.056 J
Total Organic Carbon	%	1.7	3.8	2.2	2.2
Percent Fine-Grained Sediment	%	85.3	87.0	71.4	53.6

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FORMER CIBA-GEIGY FACILITY
GLENS FALLS, NEW YORK

OCTOBER 2015 SEDIMENT
LOCK #6 SAMPLING RESULTS

FIGURE 3
DRAFT

PRELIMINARY SEDIMENT SCREENING RESULTS

Table 1
Preliminary Sediment Screening for Preliminary Constituents of Ecological Concern - Griffin Island Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

Exposure Zone Target Metal	Number of Samples	Number of Detections	Detected Concentrations (mg/kg)			Samples by NYSDEC Freshwater Sediment Classification		
			Minimum	Maximum	Median	A	B	C
Shallow River - Photic Zone								
0 - 2 Inch Depth Interval								
Cadmium	3	3	0.43	0.69	0.5	3	0	0
Chromium	3	3	20	43	21	2	1	0
Lead	3	3	10	33	12	3	0	0
Mercury	3	3	0.035	0.46	0.059	2	1	0
2 - 6 Inch Depth Interval								
Cadmium	3	3	0.36	0.8	0.57	3	0	0
Chromium	3	3	24	62	36	2	1	0
Lead	3	3	19	73	23	2	1	0
Mercury	3	3	0.068	0.15	0.14	3	0	0
6 - 12 Inch Depth Interval								
Cadmium	3	3	0.13	11	0.31	2	0	1
Chromium	3	3	8	71	19	2	1	0
Lead	3	3	25	59	35	2	1	0
Mercury	3	3	0.055	0.26	0.08	2	1	0
Deep River - Aphotic Zone								
0 - 2 Inch Depth Interval								
Cadmium	9	9	0.11	0.62	0.36	9	0	0
Chromium	9	9	8.2	27	17	9	0	0
Lead	9	9	5.6	17	13	9	0	0
Mercury	9	9	0.0084	0.09	0.042	9	0	0
2 - 6 Inch Depth Interval								
Cadmium	9	9	0.082	1.5	0.25	8	1	0
Chromium	9	9	7.9	31	15	9	0	0
Lead	9	9	5.1	30	10	9	0	0
Mercury	9	9	0.012	0.1	0.06	9	0	0

Notes:

NYSDEC Freshwater Sediment Guidance Values (mg/kg):

	Class A	Class B	Class C
Cadmium	< 1	1 - 5	> 5
Chromium, Total	< 43	43 - 110	> 110
Lead	< 36	36 - 130	> 130
Mercury	< 0.2	0.2 - 1	> 1

Table 2
Preliminary Sediment Screening for Preliminary Constituents of Ecological Concern - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

Exposure Zone Target Metal	Number of Samples	Number of Detections	Detected Concentrations (mg/kg)			Samples by NYSDEC Freshwater Sediment Classification		
			Minimum	Maximum	Median	A	B	C
Shallow River - Photic Zone								
0 - 2 Inch Depth Interval								
Cadmium	12	12	0.29	5.7	1.25	4	7	1
Chromium	12	12	21	170	37	7	4	1
Lead	12	12	16	130	38.5	4	8	0
Mercury	12	12	0.043	0.53	0.125	10	2	0
2 - 6 Inch Depth Interval								
Cadmium	12	12	0.3	6.8	1.2	4	7	1
Chromium	12	12	16	220	43	6	5	1
Lead	12	12	17	280	45	2	8	2
Mercury	12	12	0.062	0.97	0.195	6	6	0
6 - 12 Inch Depth Interval								
Cadmium	12	12	0.055	6.8	1.55	3	8	1
Chromium	12	12	8.4	400	41.5	6	5	1
Lead	12	12	6.2	290	41.5	3	8	1
Mercury	12	12	0.016	1.1	0.165	9	2	1
Deep River - Aphotic Zone								
0 - 2 Inch Depth Interval								
Cadmium	10	10	0.23	7.1	1.35	4	5	1
Chromium	10	10	15	100	29.5	6	4	0
Lead	10	10	12	76	27.5	6	4	0
Mercury	10	10	0.041	0.39	0.105	7	3	0
2 - 6 Inch Depth Interval								
Cadmium	9	9	0.11	6.3	1.4	3	4	2
Chromium	9	9	11	110	47	4	5	0
Lead	9	9	9.8	120	44	4	5	0
Mercury	9	9	0.024	1.2	0.15	6	2	1

Notes:

NYSDEC Freshwater Sediment Guidance Values (mg/kg):

	Class A	Class B	Class C
Cadmium	< 1	1 - 5	> 5
Chromium, Total	< 43	43 - 110	> 110
Lead	< 36	36 - 130	> 130
Mercury	< 0.2	0.2 - 1	> 1

SUMMARY OF SEDIMENT ANALYTICAL DATA

Table 3
Summary of Sediment Analytical Results - Griffin Island Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Griffin Island GI_01 GF1015_GI_01_0002IN 0 - 2 IN 10/27/2015	Griffin Island GI_01 GF1015_GI_01_0206IN 2 - 6 IN 10/27/2015	Griffin Island GI_01 GF1015_GI_01_0612IN 6 - 12 IN 10/27/2015	Griffin Island GI_01 GF1015_GI_01_1224IN 12 - 24 IN 10/27/2015	Griffin Island GI_02 GF1015_GI_02_0002N 0 - 2 IN 10/27/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.25 J	0.21 J	0.075 J	0.062 J	0.62 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	19 J	22 J	7 J	6.3 J	22 J
Lead	mg/kg	< 36	36 - 130	> 130	13	15	6.8	5.1	13
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.029 J	0.029 J	0.058 J	0.021 J	0.056 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.6 J	1.4 J	1.6 J	2.5 J	2.8 J
Barium	mg/kg	--	--	--	37	44	21	29	27
Selenium	mg/kg	--	--	--	0.2 J	0.21 J	0.13 J	0.23 J	0.2 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.046 J	0.05 J	0.021 J	0.023 J	0.062 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	0.0047 J	-	-	-	0.0046 J
Copper	µmol/g	--	--	--	0.075 J	-	-	-	0.075 J
Lead	µmol/g	--	--	--	0.073 J	-	-	-	0.063 J
Nickel	µmol/g	--	--	--	0.061	-	-	-	0.067
Zinc	µmol/g	--	--	--	0.54 J	-	-	-	0.45 J
Sulfide	µmol/g	--	--	--	0.89	-	-	-	3.3
SEM/AVS	unitless	--	--	--	0.84 J	-	-	-	0.2 J
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-26.2 J	-	-	-	-394.1 J
Sediment Characteristics									
Percent moisture	Percent	--	--	--	25.5	24.5	11.6	12.8	23.4
Total organic carbon	Percent	--	--	--	0.5	0.4	0.4	0.3	0.7
Percent fine-grained sediments ¹	Percent passing	--	--	--	6.5	1.5	2.7	3.7	13.7
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	3.8	3.4	3.6	1.6	4.2

Notes:

- 1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
- XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
- SGV, Sediment Guidance Value
- Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
- Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
- Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
- , Not analyzed
- , SGV not available
- Analytical data qualifiers:
- U, The analyte was analyzed for, but was not detected above the reported quantitation limit
- UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 3
Summary of Sediment Analytical Results - Griffin Island Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Griffin Island GI_02 GF1015_GI_02_0206IN 2 - 6 IN 10/27/2015	Griffin Island GI_02 GF1015_GI_02_0612IN 6 - 12 IN 10/27/2015	Griffin Island GI_02 GF1015_GI_02_1224IN 12 - 24 IN 10/27/2015	Griffin Island GI_03 GF1015_GI_03_0002IN 0 - 2 IN 10/27/2015	Griffin Island GI_03 GF1015_GI_03_0206IN 2 - 6 IN 10/27/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.65 J	0.15 J	0.056 J	0.48 J	0.14 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	15 J	16 J	5.2 J	27 J	16 J
Lead	mg/kg	< 36	36 - 130	> 130	9.7	21	2	17	13
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.079 J	0.13 J	0.0071 UJ	0.077 J	0.029 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.6 J	5.1 J	1.7 J	2.4 J	1.9 J
Barium	mg/kg	--	--	--	22	38	24	36	33
Selenium	mg/kg	--	--	--	0.17 J	0.19 J	0.21 J	0.23 J	0.2 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.039 J	0.04 J	0.015 J	0.077 J	0.039 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	0.0027 J	-	-	-	-
Copper	µmol/g	--	--	--	0.075 J	-	-	-	-
Lead	µmol/g	--	--	--	0.061 J	-	-	-	-
Nickel	µmol/g	--	--	--	0.068	-	-	-	-
Zinc	µmol/g	--	--	--	0.23 J	-	-	-	-
Sulfide	µmol/g	--	--	--	0.65	-	-	-	-
SEM/AVS	unitless	--	--	--	0.67 J	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-23.4 J	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	20.5	50.5	20.8	24.1	16.3
Total organic carbon	Percent	--	--	--	0.9	7.4	0.5	0.8	0.6
Percent fine-grained sediments ¹	Percent passing	--	--	--	6.5	2.8	5.8	18.5	4.1
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	2.5	6.7	2.4	3.8	3.8

Notes:

- 1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
- XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
- SGV, Sediment Guidance Value
- Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
- Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
- Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
- , Not analyzed
- , SGV not available
- Analytical data qualifiers:
- U, The analyte was analyzed for, but was not detected above the reported quantitation limit
- UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 3
Summary of Sediment Analytical Results - Griffin Island Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Griffin Island GI_03 GF1015_GI_03_0612IN 6 - 12 IN 10/27/2015	Griffin Island GI_03 GF1015_GI_03_1224IN 12 - 24 IN 10/27/2015	Griffin Island GI_04 GF1015_GI_04_0002IN 0 - 2 IN 10/30/2015	Griffin Island GI_04 GF1015_GI_04_0206IN 2 - 6 IN 10/30/2015	Griffin Island GI_04 GF1015_GI_04_0612IN 6 - 12 IN 10/30/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.054 J	0.051 J	0.3 J	0.27 J	0.15 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	5.2 J	4.5 J	17 J	13 J	11 J
Lead	mg/kg	< 36	36 - 130	> 130	3.1	1.8	12	9	10
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.011 J	0.0066 UJ	0.09 J	0.069 J	0.058 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.9 J	1 J	2	1.9	2.9
Barium	mg/kg	--	--	--	28	20	34	28	37
Selenium	mg/kg	--	--	--	0.2 J	0.17 J	0.21 J	0.23 J	0.42
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.021 J	0.013 J	0.053 J	0.041 J	0.046 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	19.3	23.1	25.6	17.6	13.4
Total organic carbon	Percent	--	--	--	0.4	0.4	0.9 J	0.4	0.4
Percent fine-grained sediments ¹	Percent passing	--	--	--	12.1	6.2	13.8	6.5	2.4
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	1.2	2	4	3.3	3.5

Notes:

- 1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
- XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
- SGV, Sediment Guidance Value
- Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
- Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
- Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
- , Not analyzed
- , SGV not available
- Analytical data qualifiers:
- U, The analyte was analyzed for, but was not detected above the reported quantitation limit
- UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 3
Summary of Sediment Analytical Results - Griffin Island Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Griffin Island GI_04 GF1015_GI_04_1224IN 12 - 24 IN 10/30/2015	Griffin Island GI_05 GF1015_GI_05_0002IN 0 - 2 IN 10/27/2015	Griffin Island GI_05 GF1015_GI_05_0206IN 2 - 6 IN 10/27/2015	Griffin Island GI_05 GF1015_GI_05_0612IN 6 - 12 IN 10/27/2015	Griffin Island GI_05 GF1015_GI_05_1224IN 12 - 24 IN 10/27/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.09 J	0.69 J	0.36 J	0.13 J	0.2 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	6.9 J	43 J	62 J	8 J	9.3 J
Lead	mg/kg	< 36	36 - 130	> 130	6.7	33	73	35	33
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.02 J	0.46 J	0.14 J	0.08 J	0.066 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	3	1.3 J	1.9 J	1.7 J	2.1 J
Barium	mg/kg	--	--	--	38	31	46	63	89
Selenium	mg/kg	--	--	--	0.29	0.28 J	0.46 J	0.37 J	0.42 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.037 J	0.051 J	0.062 J	0.053 J	0.096 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	13.2	36.7	42.4	40.7	43.1
Total organic carbon	Percent	--	--	--	0.3	4.5	4.2	3.7	6.2 J
Percent fine-grained sediments ¹	Percent passing	--	--	--	4.7	15.9	18.3	23.4	22.5
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	3.9	5.2	6.1	6.6	7.9

Notes:

- 1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
--, SGV not available
Analytical data qualifiers:
U, The analyte was analyzed for, but was not detected above the reported quantitation limit
UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 3
Summary of Sediment Analytical Results - Griffin Island Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Griffin Island GI_05 (DUP) GF1015_GI_05_1224IN-D 12 - 24 IN 10/27/2015	Griffin Island GI_06 GF1015_GI_06_0002IN 0 - 2 IN 10/30/2015	Griffin Island GI_06 GF1015_GI_06_0206IN 2 - 6 IN 10/30/2015	Griffin Island GI_06 GF1015_GI_06_0612IN 6 - 12 IN 10/30/2015	Griffin Island GI_06 GF1015_GI_06_1224IN 12 - 24 IN 10/30/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.15 J	0.5 J	0.57 J	11 J	0.85 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	8.9 J	20 J	24 J	71 J	48 J
Lead	mg/kg	< 36	36 - 130	> 130	29	10	19	59	97
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.14 J	0.035 J	0.068 J	0.26 J	0.093 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.1 J	1.3	1.6	1.2	1.9
Barium	mg/kg	--	--	--	84	26	36	36	42
Selenium	mg/kg	--	--	--	0.42 J	0.24 J	0.33 J	0.31 J	0.52
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.065 J	0.054 J	0.13	0.11	0.088
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	41.4	30.8	38.8	26.4	29.6
Total organic carbon	Percent	--	--	--	3.5 J	1.4	1.9	1.6 J	4.8
Percent fine-grained sediments ¹	Percent passing	--	--	--	20.4	20.2	35.4	15.4	21.1
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	7.3	3.9	4.7	3.9	4.1

Notes:

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Off-Site Sediment Characterization Sampling
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Glens Falls, New York

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Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.43 J	0.8 J	0.31 J	0.22 J	0.42 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	21 J	36 J	19 J	17	13 J
Lead	mg/kg	< 36	36 - 130	> 130	12	23	25	57	13
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.059 J	0.15 J	0.055 J	0.071 J	0.046 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.3	1.5	1.2	2.5	1.3
Barium	mg/kg	--	--	--	27	40	28	59	31
Selenium	mg/kg	--	--	--	0.27 J	0.34 J	0.3 J	0.65	0.29 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.084	0.26	0.054 J	0.08 J	0.059 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	32.3	35.3	27.8	41.2	40.8
Total organic carbon	Percent	--	--	--	1.2	1.1	2.6	6.1	2.1
Percent fine-grained sediments ¹	Percent passing	--	--	--	6.5	22.8	9.7	23.1	10.5
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	5.9	7.9	6.7	9.7	11

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Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Griffin Island GI_08 GF1015_GI_08_0206IN 2 - 6 IN 10/30/2015	Griffin Island GI_08 GF1015_GI_08_0612IN 6 - 12 IN 10/30/2015	Griffin Island GI_08 GF1015_GI_08_1224IN 12 - 24 IN 10/30/2015	Griffin Island GI_09 GF1015_GI_09_0002IN 0 - 2 IN 10/30/2015	Griffin Island GI_09 GF1015_GI_09_0206IN 2 - 6 IN 10/30/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.23 J	0.25 J	0.025 J	0.42 J	0.64 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	12 J	8 J	2.8 J	18 J	25 J
Lead	mg/kg	< 36	36 - 130	> 130	8.6	5.9	1.3	14	23
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.04 J	0.015 J	0.0067 UJ	0.042 J	0.067 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.2	1.1	0.85	1.7	1.5
Barium	mg/kg	--	--	--	23	19	11	25	32
Selenium	mg/kg	--	--	--	0.23 J	0.42	0.15 J	0.24 J	0.23 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.041 J	0.032 J	0.01 J	0.038 J	0.044 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	29.6	18.8	20.5	32.5	28.2
Total organic carbon	Percent	--	--	--	2.8	0.2	0.1	1.3	0.7
Percent fine-grained sediments ¹	Percent passing	--	--	--	20.4	4.4	64.3	30.8	14.9
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	7.5	4.1	3.9	4.9	3.9

Notes:

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Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.33 J	0.17 J	0.17 J	0.25 J	0.13 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	13 J	11 J	10 J	13 J	7.4 J
Lead	mg/kg	< 36	36 - 130	> 130	12	6.2	7.4	10	5.3
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.054 J	0.0079 J	0.025 J	0.06 J	0.027 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.2	2.4	1	1	1.6
Barium	mg/kg	--	--	--	26	41	20	20	19
Selenium	mg/kg	--	--	--	0.28 J	0.36	0.17 J	0.21 J	0.19 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.037 J	0.049 J	0.027 J	0.03 J	0.028 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	20.8	26.2	21.1	19	19.8
Total organic carbon	Percent	--	--	--	0.9	0.4	0.5	0.6	0.5
Percent fine-grained sediments ¹	Percent passing	--	--	--	12.9	73.7	11.4	10.8	5.4
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	3	4.9	5.2	5.1	5.1

Notes:

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	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Griffin Island GI_10 GF1015_GI_10_1224IN 12 - 24 IN 10/30/2015	Griffin Island GI_11 GF1015_GI_11_0002IN 0 - 2 IN 10/26/2015	Griffin Island GI_11 GF1015_GI_11_0206IN 2 - 6 IN 10/26/2015	Griffin Island GI_11 GF1015_GI_11_0612IN 6 - 12 IN 10/26/2015	Griffin Island GI_11 GF1015_GI_11_1224IN 12 - 24 IN 10/26/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.04 J	0.36 J	1.5 J	0.086 J	0.1 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	3.1 J	12 J	31 J	6.4 J	5.4 J
Lead	mg/kg	< 36	36 - 130	> 130	1.8	7.4	30	4.1	3.6
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.0063 UJ	0.034 J	0.1 J	0.01 J	0.022 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.7	1.2 J	1.2 J	0.99 J	1.2 J
Barium	mg/kg	--	--	--	17	27	28	22	20
Selenium	mg/kg	--	--	--	0.16 J	0.16 J	0.18 J	0.13 J	0.13 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.013 J	0.041 J	0.036 J	0.035 J	0.018 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent moisture	Percent	--	--	--	17.5	27.3	26.1	17.6	14
Total organic carbon	Percent	--	--	--	0.2	1.6	0.6	0.2	0.3
Percent fine-grained sediments ¹	Percent passing	--	--	--	1	2	3.5	4.3	2.5
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	3.8	3.3	4.1	1.5	1.2

Notes:

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Analytes	Units							
Preliminary Constituents of Ecological Concern (pCEC)								
Cadmium	mg/kg	< 1	1 - 5	> 5	0.11 J	0.082 J	0.041 J	0.036 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	8.2 J	7.9 J	4.7 J	3.8 J
Lead	mg/kg	< 36	36 - 130	> 130	5.6	5.1	3.6	3.8
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.0084 J	0.012 J	0.015 J	0.0084 J
Other Target Metals								
Arsenic	mg/kg	< 10	10 - 33	> 33	2.8 J	2.1 J	1.4 J	1.3 J
Barium	mg/kg	--	--	--	40	42	32	28
Selenium	mg/kg	--	--	--	0.27 J	0.24 J	0.17 J	0.15 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.044 J	0.04 J	0.022 J	0.019 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)								
Cadmium	µmol/g	--	--	--	0.0012 J	0.0009 J	-	-
Copper	µmol/g	--	--	--	0.043 J	0.049 J	-	-
Lead	µmol/g	--	--	--	0.02 J	0.02 J	-	-
Nickel	µmol/g	--	--	--	0.041	0.05	-	-
Zinc	µmol/g	--	--	--	0.25 J	0.24 J	-	-
Sulfide	µmol/g	--	--	--	0.36 J	0.13 U	-	-
SEM/AVS	unitless	--	--	--	1 J	0.001 UJ	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-1.6 J	9.6 UJ	-	-
Sediment Characteristics								
Percent moisture	Percent	--	--	--	16.2	27.8	17	15.8
Total organic carbon	Percent	--	--	--	0.3	2.4	0.9	0.5
Percent fine-grained sediments ¹	Percent passing	--	--	--	16.2	28.1	6.9	1.3
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	5.8	10	2.2	1.1

Notes:

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- Analytical data qualifiers:
 - U, The analyte was analyzed for, but was not detected above the reported quantitation limit
 - UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
 - J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_01 GF1015_L6_01_0002IN 0 - 2 IN 10/26/2015	Lock #6 L6_01 GF1015_L6_01_0206IN 2 - 6 IN 10/26/2015	Lock #6 L6_01 (DUP) GF1015_L6_01_0206IN-D 2 - 6 IN 10/26/2015	Lock #6 L6_01 GF1015_L6_01_0612IN 6 - 12 IN 10/26/2015	Lock #6 L6_01 GF1015_L6_01_1224IN 12 - 24 IN 10/26/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	1.5 J	1.3 J	1.3 J	1.4	1.9 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	35 J	36 J	36 J	40	56 J
Lead	mg/kg	< 36	36 - 130	> 130	46	46	42	47	53
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.18 J	0.19 J	0.18 J	0.18	0.3 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	3 J	3 J	2.9 J	3.1	2.5 J
Barium	mg/kg	--	--	--	97	97	97	99	71
Selenium	mg/kg	--	--	--	0.56 J	0.59 J	0.54 J	0.65	0.45 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.18 J	0.19 J	0.16 J	0.21 J	0.16 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	0.013 J	0.014 J	-	-	-
Copper	µmol/g	--	--	--	0.21 J	0.25 J	-	-	-
Lead	µmol/g	--	--	--	0.24 J	0.23 J	-	-	-
Nickel	µmol/g	--	--	--	0.16	0.17	-	-	-
Zinc	µmol/g	--	--	--	1.5 J	1.7 J	-	-	-
Sulfide	µmol/g	--	--	--	0.71 J	1.2	-	-	-
SEM/AVS	unitless	--	--	--	3.1 J	2.1 J	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	36.2 J	33.3 J	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	62.4	53.1	53.8	51.9	48.2
Total Organic Carbon	Percent	--	--	--	3.9	3.5	3.9	3.5	3.7
Percent fine-grained sediments ¹	Percent passing	--	--	--	83.5	82.5	78.3	86.2	76
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	31	28	32	23	23

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
--, SGV not available
Analytical data qualifiers:
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Table 4
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Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_02 GF1015_L6_02_0002IN 0 - 2 IN 10/26/2015	Lock #6 L6_02 GF1015_L6_02_0206IN 2 - 6 IN 10/26/2015	Lock #6 L6_02 GF1015_L6_02_0612IN 6 - 12 IN 10/26/2015	Lock #6 L6_02 GF1015_L6_02_1224IN 12 - 24 IN 10/26/2015	Lock #6 L6_02 (DUP) GF1015_L6_02_1224IN-D 12 - 24 IN 10/26/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	1.1 J	1.1 J	1.6	1.9 J	5.8 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	33 J	33 J	68 J	62 J	79 J
Lead	mg/kg	< 36	36 - 130	> 130	38	38	76	54	89
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.17 J	0.13 J	0.25 J	0.34 J	0.33 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	3.2 J	2.5 J	2.8 J	2.6 J	3.2 J
Barium	mg/kg	--	--	--	71	58	61	57	62
Selenium	mg/kg	--	--	--	0.48 J	0.38 J	0.44 J	0.38 J	0.46 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.16 J	0.12 J	0.16 J	0.14 J	0.17 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	0.012 J	0.0098 J	-	-	-
Copper	µmol/g	--	--	--	0.2 J	0.19 J	-	-	-
Lead	µmol/g	--	--	--	0.19 J	0.17 J	-	-	-
Nickel	µmol/g	--	--	--	0.16	0.16	-	-	-
Zinc	µmol/g	--	--	--	1.3 J	1.2 J	-	-	-
Sulfide	µmol/g	--	--	--	4.3	5.8 J	-	-	-
SEM/AVS	unitless	--	--	--	0.42 J	0.29 J	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-76.2 J	-131.3 J	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	54.7	49.3	51.0	46.5	44.8
Total Organic Carbon	Percent	--	--	--	3.2	3.1	3.9	3.8	3.2
Percent fine-grained sediments ¹	Percent passing	--	--	--	59.1	41.4	27.6	42.4	48.2
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	21	17	18	15	14

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
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--, SGV not available
Analytical data qualifiers:
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Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_03 GF1015_L6_03_0002IN 0 - 2 IN 10/24/2015	Lock #6 L6_03 GF1015_L6_03_0206IN 2 - 6 IN 10/24/2015	Lock #6 L6_03 (DUP) GF1015_L6_03_0206IN-D 2 - 6 IN 10/24/2015	Lock #6 L6_04 GF1015_L6_04_0002IN 0 - 2 IN 10/25/2015	Lock #6 L6_04 GF1015_L6_04_0206IN 2 - 6 IN 10/25/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	7.1 J	6.3 J	7 J	1.1 J	0.99 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	36 J	100 J	120 J	39 J	38 J
Lead	mg/kg	< 36	36 - 130	> 130	41	110	130	37	38
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.13 J	1 J	0.53 J	0.13 J	0.17 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.2 J	2.1 J	2.2 J	3.2 J	2.9 J
Barium	mg/kg	--	--	--	45	58	57	69	52
Selenium	mg/kg	--	--	--	0.37	0.4	0.45	0.52 J	0.38 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.079	0.46	0.18	0.12	0.13
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	0.0054 J	0.028 J	-	-	-
Copper	µmol/g	--	--	--	0.12 J	0.13 J	-	-	-
Lead	µmol/g	--	--	--	0.14 J	0.18 J	-	-	-
Nickel	µmol/g	--	--	--	0.16	0.19	-	-	-
Zinc	µmol/g	--	--	--	1.1 J	1.4 J	-	-	-
Sulfide	µmol/g	--	--	--	0.7 UJ	1.7	-	-	-
SEM/AVS	unitless	--	--	--	4.4 J	1.1 J	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	78.4 J	7.1 J	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	33.7	39.6	39.9	54.8	42.4
Total Organic Carbon	Percent	--	--	--	1.5	3.2	5.3	3.2	2.4
Percent fine-grained sediments ¹	Percent passing	--	--	--	18.8	29.8	26.1	57.9	33.9
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	8.4	7.6	8	17	8.9

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
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SGV, Sediment Guidance Value
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Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_04 GF1015_L6_04_0612IN 6 - 12 IN 10/25/2015	Lock #6 L6_04 GF1015_L6_04_1224IN 12 - 24 IN 10/25/2015	Lock #6 L6_05 GF1015_L6_05_0002IN 0 - 2 IN 10/25/2015	Lock #6 L6_05 GF1015_L6_05_0206IN 2 - 6 IN 10/25/2015	Lock #6 L6_05 GF1015_L6_05_0612IN 6 - 12 IN 10/25/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.41 J	0.078 J	1.4 J	3 J	0.23 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	19 J	6.2 J	61 J	89 J	15 J
Lead	mg/kg	< 36	36 - 130	> 130	45	12	98	280	45
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.19 J	0.033 J	0.18 J	0.33 J	0.11 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	3.4 J	1.8 J	2.2 J	2.9 J	2.2 J
Barium	mg/kg	--	--	--	83	33	38	65	48
Selenium	mg/kg	--	--	--	0.51 J	0.15 J	0.35 J	0.64	0.41 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.086 J	0.021 J	0.17	0.37	0.083 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	53.2	29.5	46.3	60.2	44.1
Total Organic Carbon	Percent	--	--	--	4.6	0.5	3.9	7.7	5.1
Percent fine-grained sediments ¹	Percent passing	--	--	--	24.6	34.2	27.9	39.8	30.7
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	9.8	4	11	17	9.5

Notes:
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Summary of Sediment Analytical Results - Lock #6 Focus Area
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Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_05 GF1015_L6_05_1224IN 12 - 24 IN 10/25/2015	Lock #6 L6_06 GF1015_L6_06_0002IN 0 - 2 IN 10/25/2015	Lock #6 L6_06 GF1015_L6_06_0206IN 2 - 6 IN 10/25/2015	Lock #6 L6_06 (DUP) GF1015_L6_06_0206IN-D 2 - 6 IN 10/25/2015	Lock #6 L6_06 GF1015_L6_06_0612IN 6 - 12 IN 10/25/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.038 J	0.84 J	1.1 J	1.2 J	4.3 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	4.2 J	33 J	48 J	51 J	52
Lead	mg/kg	< 36	36 - 130	> 130	3	31	44	46	36
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.014 J	0.088 J	0.2 J	1.8 J	0.14 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.1 J	2.9 J	2.7 J	3 J	2
Barium	mg/kg	--	--	--	22	42	41	43	54
Selenium	mg/kg	--	--	--	0.19 J	0.4 J	0.38 J	0.41 J	0.47
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.016 J	0.12	0.12 J	0.11 J	0.16
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	17.0	44.6	47.8	44.7	45.7
Total Organic Carbon	Percent	--	--	--	0.5	3.4	3.5	3.0	3.8
Percent fine-grained sediments ¹	Percent passing	--	--	--	4.7	39	33	39	45.3
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	1.9	12	12	12	14

Notes:
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Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_06 GF1015_L6_06_1224IN 12 - 24 IN 10/25/2015	Lock #6 L6_06 (DUP) GF1015_L6_06_1224IN-D 12 - 24 IN 10/25/2015	Lock #6 L6_07 GF1015_L6_07_0002IN 0 - 2 IN 10/25/2015	Lock #6 L6_07 GF1015_L6_07_0206IN 2 - 6 IN 10/25/2015	Lock #6 L6_07 (DUP) GF1015_L6_07-02- 2 - 6 IN 10/25/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	1.8 J	2.1 J	1.3 J	3.2 J	-
Chromium, Total	mg/kg	< 43	43 - 110	> 110	59 J	69 J	44 J	60 J	-
Lead	mg/kg	< 36	36 - 130	> 130	48	58	35	55	-
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.43 J	0.27 J	0.16 J	1.2 J	-
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.1 J	2.3 J	2.4 J	1.9 J	-
Barium	mg/kg	--	--	--	66	74	57	56	-
Selenium	mg/kg	--	--	--	0.47 J	0.67	0.47 J	0.45 J	-
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.25	0.32	0.14	0.22	-
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	0.0091 J	0.018 J	0.0093 J
Copper	µmol/g	--	--	--	-	-	0.19 J	0.19 J	0.17 J
Lead	µmol/g	--	--	--	-	-	0.16 J	0.16 J	0.16 J
Nickel	µmol/g	--	--	--	-	-	0.18	0.18	0.16
Zinc	µmol/g	--	--	--	-	-	1.4 J	1.4 J	1.3 J
Sulfide	µmol/g	--	--	--	-	-	5.8	8.7	8.2
SEM/AVS	unitless	--	--	--	-	-	0.33 J	0.22 J	0.22 J
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-117.0 J	-127.4 J	-120.8
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	49.5	50.6	58.2	51.9	53
Total Organic Carbon	Percent	--	--	--	4.3	5.5	3.3	5.3	-
Percent fine-grained sediments ¹	Percent passing	--	--	--	59.3	59.2	48.7	29.5	-
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	18	15	15	16	-

Notes:
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Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
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Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_07 GF1015_L6_07_0612IN 6 - 12 IN 10/25/2015	Lock #6 L6_07 GF1015_L6_07_1224IN 12 - 24 IN 10/25/2015	Lock #6 L6_08 GF1015_L6_08_0002IN 0 - 2 IN 10/25/2015	Lock #6 L6_08 GF1015_L6_08_0206IN 2 - 6 IN 10/25/2015	Lock #6 L6_09 GF1015_L6_09_0002IN 0 - 2 IN 10/24/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	40 J	2.1 J	0.37 J	0.19 J	0.29 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	610 J	380 J	23 J	17 J	16 J
Lead	mg/kg	< 36	36 - 130	> 130	610	310	18	13	14
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	8.4 J	0.75 J	0.08 J	0.038 J	0.055 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.4 J	2.2 J	1.7 J	1.5 J	2 J
Barium	mg/kg	--	--	--	130	51	41	29	29
Selenium	mg/kg	--	--	--	0.74	0.55 J	0.29 J	0.22 J	0.22 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.55	0.27	0.064 J	0.046 J	0.044 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	63.4	56.4	30.8	22.4	17.3
Total Organic Carbon	Percent	--	--	--	9.2	12.0	4.1	2.5 J	4.3
Percent fine-grained sediments ¹	Percent passing	--	--	--	56.1	24.2	-	5.2	11.3
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	30	15	6.2	2.7	9.1

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
--, SGV not available
Analytical data qualifiers:
U, The analyte was analyzed for, but was not detected above the reported quantitation limit
UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_09 GF1015_L6_09_0206IN 2 - 6 IN 10/24/2015	Lock #6 L6_09 GF1015_L6_09_0612IN 6 - 12 IN 10/24/2015	Lock #6 L6_09 GF1015_L6_09_1224IN 12 - 24 IN 10/24/2015	Lock #6 L6_10 GF1015_L6_10_0002IN 0 - 2 IN 10/24/2015	Lock #6 L6_10 GF1015_L6_10_0206IN 2 - 6 IN 10/24/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.11 J	0.12 J	0.055 J	3.2 J	1.3 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	11 J	11 J	4.1 J	70 J	47 J
Lead	mg/kg	< 36	36 - 130	> 130	9.8	9	3.4	66	44
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.024 J	0.017 J	0.0094 J	0.3 J	0.15 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.1 J	1.7 J	1.1 J	2.2 J	2.3 J
Barium	mg/kg	--	--	--	23	25	18	52	48
Selenium	mg/kg	--	--	--	0.19 J	0.19 J	0.14 J	0.41 J	0.38 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.028 J	0.023 J	0.015 J	0.11	0.075 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	0.049 J	0.02 J
Copper	µmol/g	--	--	--	-	-	-	0.21 J	0.14 J
Lead	µmol/g	--	--	--	-	-	-	0.42 J	0.19 J
Nickel	µmol/g	--	--	--	-	-	-	0.13	0.12
Zinc	µmol/g	--	--	--	-	-	-	1.6 J	1.2 J
Sulfide	µmol/g	--	--	--	-	-	-	1.4	1.6
SEM/AVS	unitless	--	--	--	-	-	-	1.7 J	1 J
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	18.7 J	1.2 J
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	13.4	16.0	16.4	49.0	41.6
Total Organic Carbon	Percent	--	--	--	0.4	0.3	0.1	5.4	5.7
Percent fine-grained sediments ¹	Percent passing	--	--	--	2.8	0.5	1.7	24.5	19.8
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	8.1	3.9	1.7	16	10

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
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-, Not analyzed
--, SGV not available
Analytical data qualifiers:
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Table 4
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Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_10 GF1015_L6_10_0612IN 6 - 12 IN 10/24/2015	Lock #6 L6_10 GF1015_L6_10_1224IN 12 - 24 IN 10/24/2015	Lock #6 L6_11 GF1015_L6_11_0002IN 0 - 2 IN 10/24/2015	Lock #6 L6_11 GF1015_L6_11_0206IN 2 - 6 IN 10/24/2015	Lock #6 L6_11 GF1015_L6_11_0612IN 6 - 12 IN 10/24/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	1.3 J	2.2 J	3.7	1.4 J	0.12 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	53 J	30 J	100 J	41 J	16 J
Lead	mg/kg	< 36	36 - 130	> 130	38	23	76	34	16
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.63 J	0.11 J	0.39	0.065 J	0.028 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.3 J	1.1 J	5.1 J	1.8 J	2.9 J
Barium	mg/kg	--	--	--	44	35	98	40	28
Selenium	mg/kg	--	--	--	0.41 J	0.27 J	0.85 J	0.3 J	0.21 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.092	0.053 J	0.26	0.12	0.024 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	44.3	39.4	70.3	33.6	15.4
Total Organic Carbon	Percent	--	--	--	5.7	2.8	7.6	0.9	0.3
Percent fine-grained sediments ¹	Percent passing	--	--	--	13.6	17.7	54.7	10.6	2.4
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	20	10	33	23	3.8

Notes:
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SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
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Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
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Analytical data qualifiers:
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Table 4
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Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_11 GF1015_L6_11_1224IN 12 - 24 IN 10/24/2015	Lock #6 L6_12 GF1015_L6_12_0002IN 0 - 2 IN 10/23/2015	Lock #6 L6_13 GF1015_L6_13_0002IN 0 - 2 IN 10/23/2015	Lock #6 L6_13 GF1015_L6_13_0206IN 2 - 6 IN 10/23/2015	Lock #6 L6_13 (DUP) GF1015_L6_13-02- 2 - 6 IN 10/25/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.24 J	0.23 J	5.7 J	6.8 J	-
Chromium, Total	mg/kg	< 43	43 - 110	> 110	23 J	15 J	170 J	220 J	-
Lead	mg/kg	< 36	36 - 130	> 130	23	12	130	180	-
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.032 J	0.041 J	0.53 J	0.97 J	-
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	3.8 J	1.4 J	2.3 J	2.6 J	-
Barium	mg/kg	--	--	--	36	31	57	57	-
Selenium	mg/kg	--	--	--	0.28	0.2 J	0.52	0.59	-
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.026 J	0.023 J	0.24	0.24	-
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	0.029 J	0.056 J	0.038 J
Copper	µmol/g	--	--	--	-	-	0.2 J	0.37 J	0.28 J
Lead	µmol/g	--	--	--	-	-	0.31 J	0.82 J	0.56 J
Nickel	µmol/g	--	--	--	-	-	0.14	0.18	0.15
Zinc	µmol/g	--	--	--	-	-	1.5 J	2.7 J	2 J
Sulfide	µmol/g	--	--	--	-	-	1.3	3.8	2.8
SEM/AVS	unitless	--	--	--	-	-	1.6 J	1.1 J	1.1 J
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	33.8 J	7.4 J	5.2 J
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	9.1	24.7	49.6	50.3	43
Total Organic Carbon	Percent	--	--	--	0.4	1.2 J	2.6	4.4	-
Percent fine-grained sediments ¹	Percent passing	--	--	--	4.9	10.6	47.1	53.2	-
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	3.3	3.3	14	17	-

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
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Table 4
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Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_13 GF1015_L6_13_0612IN 6 - 12 IN 10/23/2015	Lock #6 L6_13 GF1015_L6_13_1218N 12 - 18 IN 10/23/2015	Lock #6 L6_13 GF1015_L6_13_1824IN 18 - 24 IN 10/23/2015	Lock #6 L6_14 GF1015_L6_14_0002IN 0 - 2 IN 10/23/2015	Lock #6 L6_14 GF1015_L6_14_0206IN 2 - 6 IN 10/23/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	6.8 J	0.54 J	0.12 J	0.59 J	0.3 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	400 J	76 J	18 J	21 J	16 J
Lead	mg/kg	< 36	36 - 130	> 130	290	86	14	16	17
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	1.1 J	0.15 J	0.045 J	0.047 J	0.073 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.7 J	4.1 J	3.8 J	2.2 J	4.2 J
Barium	mg/kg	--	--	--	68	60	77	38	41
Selenium	mg/kg	--	--	--	0.61	0.53	0.35	0.25 J	0.35 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.33	0.11	0.046 J	0.068 J	0.056 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	57.5	45.8	30.3	35.9	30.7
Total Organic Carbon	Percent	--	--	--	5.7	3.7 J	0.5	1.0	0.4
Percent fine-grained sediments ¹	Percent passing	--	--	--	53.7	28.7	-	34.2	51.7
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	16	12	15	8.6	5.8

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
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Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_14 (DUP) GF1015_L6_14-2-6D 2 - 6 IN 10/25/2015	Lock #6 L6_14 GF1015_L6_14_0612IN 6 - 12 IN 10/23/2015	Lock #6 L6_14 GF1015_L6_14_1224IN 12 - 24 IN 10/23/2015	Lock #6 L6_15 GF1015_L6_15_0002IN 0 - 2 IN 10/23/2015	Lock #6 L6_15 GF1015_L6_15_0206IN 2 - 6 IN 10/23/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.31 J	1.9 J	2.6 J	2.3 J	0.54
Chromium, Total	mg/kg	< 43	43 - 110	> 110	18 J	47 J	50 J	30 J	32
Lead	mg/kg	< 36	36 - 130	> 130	14	38	44	23	25
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.04 J	0.13 J	0.33 J	0.098 J	0.078
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	3.2 J	1.2 J	2.1 J	2.2 J	2.3 J
Barium	mg/kg	--	--	--	39	38	45	49	37
Selenium	mg/kg	--	--	--	0.26 J	0.3 J	0.32 J	0.36 J	0.25 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.053 J	0.18	0.13	0.073 J	0.038 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	25.3	29.3	34.4	38.7	41.0
Total Organic Carbon	Percent	--	--	--	0.6	1.5	1.8	1.7 J	2.6
Percent fine-grained sediments ¹	Percent passing	--	--	--	40.7	13.1	10.7	40.1	35.9
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	4.6	5.2	8.7	8.8	8.6

Notes:

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SGV, Sediment Guidance Value
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Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_15 GF1015_L6_15_0612IN 6 - 12 IN 10/23/2015	Lock #6 L6_15 GF1015_L6_15_1224IN 12 - 24 IN 10/23/2015	Lock #6 L6_16 GF1015_L6_16_0002IN 0 - 2 IN 10/22/2015	Lock #6 L6_16 GF1015_L6_16_0206IN 2 - 6 IN 10/22/2015	Lock #6 L6_16 GF1015_L6_16_0612IN 6 - 12 IN 10/22/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	1.3 J	1.5 J	0.63 J	0.43 J	0.055 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	34 J	48 J	58 J	35 J	8.4
Lead	mg/kg	< 36	36 - 130	> 130	29	42	59	40	6.2
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.11 J	0.27 J	0.086 J	0.062 J	0.016 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	2.2 J	1.7 J	2.9 J	5.3 J	0.89
Barium	mg/kg	--	--	--	40	46	41 J	42 J	17
Selenium	mg/kg	--	--	--	0.33 J	0.43 J	0.3 J	0.37 J	0.15 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.2	0.12	0.09 J	0.058 J	0.0065 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	0.0021 J	0.023 J	-
Copper	µmol/g	--	--	--	-	-	0.12 J	0.21 J	-
Lead	µmol/g	--	--	--	-	-	0.062	0.38	-
Nickel	µmol/g	--	--	--	-	-	0.14	0.17	-
Zinc	µmol/g	--	--	--	-	-	0.49 J	1.1 J	-
Sulfide	µmol/g	--	--	--	-	-	0.4 J	0.6 J	-
SEM/AVS	unitless	--	--	--	-	-	2 J	3 J	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	18.8 J	71.3 J	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	37.3	44.9	30.2	35.4	15.7
Total Organic Carbon	Percent	--	--	--	6.6	5.4	2.2	1.8	0.5
Percent fine-grained sediments ¹	Percent passing	--	--	--	26.9	41.3	15.5	14	4.9
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	16	14	6.6	5.6	1.9

Notes:
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	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_16 GF1015_L6_16_1224IN 12 - 24 IN 10/22/2015	Lock #6 L6_17 GF1015_L6_17_0002IN 0 - 2 IN 10/22/2015	Lock #6 L6_17 GF1015_L6_17_0206IN 2 - 6 IN 10/22/2015	Lock #6 L6_17 GF1015_L6_17_0612IN 6 - 12 IN 10/22/2015	Lock #6 L6_17 GF1015_L6_17_1224IN 12 - 24 IN 10/22/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.024 J	1.6 J	5.8 J	4.4 J	3.4 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	2.7	58	110	130	91
Lead	mg/kg	< 36	36 - 130	> 130	1.7	47	120	130	83
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.0069 UJ	0.25 J	0.34 J	0.34 J	0.51 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	0.92	2.5	2.7	2.2	1.8
Barium	mg/kg	--	--	--	12	48	64	62	55
Selenium	mg/kg	--	--	--	0.095 J	0.32 J	0.51 J	0.49 J	0.38 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.0024 U	0.086 J	0.18	0.17	0.15
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	20.7	45.6	56.3	61.9	53.7
Total Organic Carbon	Percent	--	--	--	0.1 J	5.5	8.7	15.0	8.4
Percent fine-grained sediments ¹	Percent passing	--	--	--	1.8	40.8	24.5	22.5	32.7
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	1.5	10	13	22	18

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
--, SGV not available
Analytical data qualifiers:
U, The analyte was analyzed for, but was not detected above the reported quantitation limit
UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_18 GF1015_L6_18_0002IN 0 - 2 IN 10/22/2015	Lock #6 L6_18 GF1015_L6_18_0206IN 2 - 6 IN 10/22/2015	Lock #6 L6_18 GF1015_L6_18_0612IN 6 - 12 IN 10/22/2015	Lock #6 L6_18 GF1015_L6_18_1215IN 12 - 15 IN 10/22/2015	Lock #6 L6_19 GF1015_L6_19_0002IN 0 - 2 IN 10/22/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	1.4 J	1.4 J	12 J	3.8 J	0.23
Chromium, Total	mg/kg	< 43	43 - 110	> 110	23	48	160	96	15
Lead	mg/kg	< 36	36 - 130	> 130	20	49	180	90	12
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.072 J	0.16 J	0.72 J	0.39 J	0.042
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	3.2	3.3	3.6	3.3	2.8
Barium	mg/kg	--	--	--	74	63	75	68	64
Selenium	mg/kg	--	--	--	0.39 J	0.38 J	0.59 J	0.47 J	0.29 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.074 J	0.085 J	0.25	0.16	0.043 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	43.3	45.4	58.2	43.7	44.8
Total Organic Carbon	Percent	--	--	--	1.9	3.2	5.6	3.8	1.9
Percent fine-grained sediments ¹	Percent passing	--	--	--	84.5	63.3	62.2	-	71.3
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	12	12	12	10	13

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
--, SGV not available
Analytical data qualifiers:
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Table 4
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Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_19 GF1015_L6_19_0206IN 2 - 6 IN 10/22/2015	Lock #6 L6_19 GF1015_L6_19_0612IN 6 - 12 IN 10/22/2015	Lock #6 L6_19 GF1015_L6_19_1224IN 12 - 24 IN 10/22/2015	Lock #6 L6_20 GF1015_L6_20_0002IN 0 - 2 IN 10/21/2015	Lock #6 L6_20 GF1015_L6_20_0206IN 2 - 6 IN 10/21/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	0.4 J	0.79 J	0.88 J	2.5 J	2.9 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	22	28	23	63	62
Lead	mg/kg	< 36	36 - 130	> 130	20	26	27	57	53
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.063 J	0.094 J	0.086 J	0.35 J	0.33 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	4.1	3.1	1.7	2.8	2.1
Barium	mg/kg	--	--	--	65	66	41	73	56
Selenium	mg/kg	--	--	--	0.32 J	0.46 J	0.29 J	0.38 J	0.33 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.052 J	0.12	0.089	0.12	0.24
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	36.9	41.7	31.5	49.1	40.6
Total Organic Carbon	Percent	--	--	--	1.7	2.0	1.7	2.3	2.8
Percent fine-grained sediments ¹	Percent passing	--	--	--	34.6	56.3	30.4	64.3	35.9
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	8.9	12	5	16	9.6

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
Bold values indicate concentration is within NYSDEC Freshwater SGV Class B
Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
--, SGV not available
Analytical data qualifiers:
U, The analyte was analyzed for, but was not detected above the reported quantitation limit
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Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_20 GF1015_L6_20_0612IN 6 - 12 IN 10/21/2015	Lock #6 L6_20 GF1015_L6_20_1224IN 12 - 24 IN 10/21/2015	Lock #6 L6_21 GF1015_L6_21_0002IN 0 - 2 IN 10/21/2015	Lock #6 L6_21 GF1015_L6_21_0206IN 2 - 6 IN 10/21/2015	Lock #6 L6_21 GF1015_L6_21_0612IN 6 - 12 IN 10/21/2015
Analytes	Units								
Preliminary Constituents of Ecological Concern (pCEC)									
Cadmium	mg/kg	< 1	1 - 5	> 5	1.5 J	2.1 J	0.29 J	2 J	2 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	43	85	21	68	45
Lead	mg/kg	< 36	36 - 130	> 130	40	110	16	67	43
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.19 J	0.37 J	0.043 J	0.32 J	0.15 J
Other Target Metals									
Arsenic	mg/kg	< 10	10 - 33	> 33	1.1	1.8	3.6	3.6	3
Barium	mg/kg	--	--	--	35	43	83	73	70
Selenium	mg/kg	--	--	--	0.24 J	0.29 J	0.36 J	0.39 J	0.42 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.14	0.13	0.051 J	0.24	0.072 J
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)									
Cadmium	µmol/g	--	--	--	-	-	-	-	-
Copper	µmol/g	--	--	--	-	-	-	-	-
Lead	µmol/g	--	--	--	-	-	-	-	-
Nickel	µmol/g	--	--	--	-	-	-	-	-
Zinc	µmol/g	--	--	--	-	-	-	-	-
Sulfide	µmol/g	--	--	--	-	-	-	-	-
SEM/AVS	unitless	--	--	--	-	-	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-	-	-	-
Sediment Characteristics									
Percent Moisture	Percent	--	--	--	36.3	47.0	44.4	50.5	43.9
Total Organic Carbon	Percent	--	--	--	3.2	4.5	1.7	3.8	2.2
Percent fine-grained sediments ¹	Percent passing	--	--	--	12.6	11.7	85.3	87	71.4
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	6	10	17	18	13

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
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Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
-, Not analyzed
--, SGV not available
Analytical data qualifiers:
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Table 4
Summary of Sediment Analytical Results - Lock #6 Focus Area
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

	Focus Area Location ID Sample Name Sample Depth Sample Date	NYSDEC Freshwater SGV Class A	NYSDEC Freshwater SGV Class B	NYSDEC Freshwater SGV Class C	Lock #6 L6_21 GF1015_L6_21_1224IN 12 - 24 IN 10/21/2015	Lock #6 L6_22 GF1015_L6_22_0002IN 0 - 2 IN 10/21/2015	Lock #6 L6_22 GF1015_L6_22_0206IN 2 - 6 IN 10/21/2015	Lock #6 L6_22 GF1015_L6_22_0612N 6 - 12 IN 10/21/2015	Lock #6 L6_22 GF1015_L6_22_1224IN 12 - 24 IN 10/21/2015	Lock #6 L6_22 (DUP) GF1015_L6_22_1224IN-D 12 - 24 IN 10/21/2015
Analytes	Units									
Preliminary Constituents of Ecological Concern (pCEC)										
Cadmium	mg/kg	< 1	1 - 5	> 5	0.26 J	1.4 J	2.1 J	1.7 J	3 J	3.1 J
Chromium, Total	mg/kg	< 43	43 - 110	> 110	17	44	59	37	57	56
Lead	mg/kg	< 36	36 - 130	> 130	15	39	52	28	48	44
Mercury	mg/kg	< 0.2	0.2 - 1	> 1	0.054 J	0.12 J	0.2 J	0.21 J	0.23 J	0.27 J
Other Target Metals										
Arsenic	mg/kg	< 10	10 - 33	> 33	3	3	2.9	2.4	2.7	2.5
Barium	mg/kg	--	--	--	82	63	68	63	65	75
Selenium	mg/kg	--	--	--	0.47 J	0.4 J	0.42 J	0.31 J	0.43 J	0.5 J
Silver	mg/kg	< 1	1 - 2.2	> 2.2	0.056 J	0.095	0.12	0.11	0.17	0.13
Simultaneously Extracted Metals (SEM) - Acid Volatile Sulfides (AVS)										
Cadmium	µmol/g	--	--	--	-	0.0066 J	0.0087 J	-	-	-
Copper	µmol/g	--	--	--	-	0.2 J	0.17 J	-	-	-
Lead	µmol/g	--	--	--	-	0.11	0.12	-	-	-
Nickel	µmol/g	--	--	--	-	0.25	0.2	-	-	-
Zinc	µmol/g	--	--	--	-	0.77 J	0.83 J	-	-	-
Sulfide	µmol/g	--	--	--	-	4.2	2.2	-	-	-
SEM/AVS	unitless	--	--	--	-	0.31 J	0.61 J	-	-	-
SEM-AVS/f _{oc}	µmol/g _{oc}	--	--	--	-	-136.4 J	-34.9 J	-	-	-
Sediment Characteristics										
Percent Moisture	Percent	--	--	--	37.9	44.0	39.9	45.8	37.0	36.9
Total Organic Carbon	Percent	--	--	--	2.2	2.1	2.5	2.1	2.6	2.3
Percent fine-grained sediments ¹	Percent passing	--	--	--	53.6	58.8	57.4	67.4	67.3	66.4
Cation-Exchange Capacity (CEC)	meq/100g	--	--	--	12	13	12	17	11	11

Notes:
1, Percent passing a No. 200 ASTM sieve (< 75 µm particle diameter)
XXX, The analyte was analyzed for, but was not detected above the reported quantitation limit
SGV, Sediment Guidance Value
Regular font values indicate concentration is within NYSDEC Freshwater SGV Class A
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Bold and shaded values indicate concentration is within NYSDEC Freshwater SGV Class C
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UJ, The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J, The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

BIOLOGICALLY ACTIVE ZONE (BAZ) ASSESSMENT

Table 5
Sediment Profile Imaging (SPI) Survey Parameters and Definitions
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

SPI Survey Parameters	Definition
Water Depth (ft)	Depth of water to sediment-surface water interface.
Grain Size Major Mode (phi)	The sediment grain size major mode and range were visually estimated from the color images by overlaying a grain size comparator that was at the same scale. Results were reported using a phi scale with nine grain size classes (see next page).
Mean Prism Penetration Depth (cm)	The SPI prism penetration depth was measured from the bottom of the image to the sediment-water interface.
Mean Boundary Roughness (cm)	Surface boundary roughness was determined by measuring the vertical distance between the highest and lowest points of the sediment-water interface.
Predominant Type of Boundary Roughness	The surface boundary roughness (sediment surface relief) may be related to either physical structures (ripples, rip-up structures, mud clasts) or biogenic features (burrow openings, fecal mounds, foraging depressions).
Mean aRPD (cm)	The apparent redox potential discontinuity (aRPD) was measured from the surface-water sediment interface to the boundary between the oxidized colored ferric hydroxide surface sediment and reduced underlying gray to black sediment.
Mean of BAZ Maximum Depth (cm)	The maximum boundaries of the biologically active zone (BAZ) are defined to extend from the sediment surface, down into the sediment to the maximum depth of subsurface biogenic structures (e.g., burrows and feeding voids).
Mean # of Subsurface Feeding Voids	Average number of subsurface feeding voids
Mean of Maximum Subsurface Feeding Void Depth (cm)	The depth from the sediment-surface water interface to the average depth of active feeding voids was defined as an upper zone of the BAZ, where sediment mixing was more complete.
Methane Presence	The process of methanogenesis is indicated by the appearance of methane bubbles in the sediment column. These gas-filled voids are readily discernable in SPI images because of their irregular, generally circular aspect and glassy texture (due to the reflection of the strobe off the gas bubble).

Grain Size Scale for Sediments

Phi (Φ) Size	Size Range (mm)	Size Class (Wentworth Class)
<-8	>256	Boulder
-7 to -8	128 to 256	Cobble
-6 to -7	64 to 128	Cobble
-5 to -6	32 to 64	Very coarse pebble
-4 to -5	16 to 32	Coarse pebble
-3 to -4	8 to 16	Medium pebble
-2 to -3	4 to 8	Fine pebble
-1 to -2	2 to 4	Pebble
0 to -1	1 to 2	Very coarse sand
1 to 0	0.5 to 1	Coarse sand
2 to 1	0.25 to 0.5	Medium sand
3 to 2	0.125 to 0.25	Fine sand
4 to 3	0.0625 to 0.125	Very fine sand
>4	<0.0625	Silt/clay

Excerpted from: *Report for the Sediment Profile Imaging Survey at the Griffin Island and Lock 6 Focus Areas of the Hudson River, Glens Falls, NY, October 2015.* Prepared by Germano & Associates, Inc.

Table 6
Summary SPI Results (Station Means) at the Griffin Island Focus Area, October 2015
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

Station	Water Depth (ft)	Grain Size Major Mode (phi)	Mean Prism Penetration Depth (in)	Mean Boundary Roughness (in)	Predominant Type of Boundary Roughness	Mean aRPD (in)	Mean of BAZ Maximum Depth (in)	Mean # of Subsurface Feeding Voids	Mean of Maximum Subsurface Feeding Void Depth (in)	Methane Presence	Benthic Type
GI-01	ND	3 to 2	1.5	0.4	Physical	0.315	Ind	0		No	Layered silty fine sand with worm tubes and/or burrows, occasional gravel
GI-02	13	3 to 2	1.9	0.4	Physical	0.5	1.6	0		No	Layered silty fine sand with worm tubes and/or burrows, occasional gravel
GI-03	12	3 to 2	1.4	0.6	Physical	0.6	0.8	0		No	Layered silty fine sand with worm tubes and/or burrows, occasional gravel
GI-04	9.5	4 to 3	0.9	0.6	Physical	0.4	0.6	0		No	Layered silty fine sand with worm tubes and/or burrows, occasional gravel
GI-05	3	3 to 2	1.4	0.8	Physical	Ind	1.0	0		No	Well sorted fine sand, shallow to medium aRPD
GI-06	2	4 to 3	1.7	0.8	Ind	0.8661	Ind	0		No	Well sorted fine sand, shallow to medium aRPD
GI-07	2	3 to 2	1.1	0.4	Physical	0.7	0.6	0		No	Well sorted fine sand, shallow to medium aRPD
GI-08	11	3 to 2	3.8	0.6693	Ind	0.7087	2.8346	0		No	Highly organic, very silty fine sand, thin burrows
GI-09	11	3 to 2	3.2	0.5	Physical	0.8661	1.8504	0		Yes	Highly organic, very silty fine sand, thin burrows
GI-10	11.5	3 to 2	3.3	0.5	Physical	1.4	3.6	0		No	Highly organic, very silty fine sand, thin burrows
GI-11	20.0	3 to 2	2.5	1.3	Physical	0.4	1.0	0		No	Well sorted fine sand, shallow to medium aRPD
GI-12	8.0	3 to 2	2.8	0.7	Physical	0.8	2.2	0		No	Well sorted fine sand, shallow to medium aRPD
Max	20.0		3.8	1.3		1.4	3.6	0			
Min	2.0		0.9	0.4		0.3	0.6	0			
Mean	9		2.1	0.6		0.7	1.6	0			

Notes:

aRPD, Apparent redox potential discontinuity

Ind, Indeterminate

ND, No data

Modified from: Table 3-1 in *Report for the Sediment Profile Imaging Survey at the Griffin Island and Lock 6 Focus Areas of the Hudson River, Glens Falls, NY, October 2015*.

Prepared by Germano & Associates, Inc., February 2016.

Table 7
Summary SPI Results (Station Means) at the Lock 6 Focus Area, October 2015
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

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Station	Water Depth (ft)	Grain Size Major Mode (phi)	Mean Prism Penetration Depth (in)	Mean Boundary Roughness (in)	Predominant Type of Boundary Roughness	Mean aRPD (in)	Mean of BAZ Maximum Depth (in)	Mean # of Subsurface Feeding Voids	Mean of Maximum Subsurface Feeding Void Depth (in)	Methane Presence	Benthic Type
L6-01	11	>4	6.8	1.6	Physical	Ind	6.8	0	0	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-02	5	>4	4.4	0.8	Biological	0.6	4.7	0.3	1.6	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-03	13	3 to 2	1.3	0.4	Biological	1.0	0.8	0	0	No	Layered silty fine sand with worm tubes and/or burrows, occasional gravel
L6-04	2.5	>4	2.4	0.5	Biological	0.5	2.7	0.3	0.2	No	Highly organic, very silty fine sand, thin burrows
L6-05	2	3 to 2	4.0	0.4	Physical	0.2	2.6	1.0	1.0	Yes	Well sorted fine sand, shallow to medium aRPD
L6-06	5	>4	8.7	0.3	Ind	Ind	8.1	0	0	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-07	18	>4	7.6	0.7	Biological	0.4	4.7	0	0	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-08	24	Ind	0.0	Ind	Physical	Ind	Ind	Ind	0	Ind	Hard bottom
L6-09	20	-1 to -2	1.6	0.8	Physical	Ind	Ind	0	0	No	Slightly silty, sandy gravel
L6-10	17.3	2 to 1	2.6	1.1	Physical	0.6	2.6	0	0	Yes	Slightly silty, sandy gravel
L6-11	26.6	>4	5.7	0.2	Biological	0.6	4.8	0.3	3.5	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-12	15.2	>4 / 3 to 2	1.9	0.4	Physical	0.7	1.9	0	0	No	Layered silty fine sand with worm tubes and/or burrows, occasional gravel

Table 7
Summary SPI Results (Station Means) at the Lock 6 Focus Area, October 2015
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York

Station	Water Depth (ft)	Grain Size Major Mode (phi)	Mean Prism Penetration Depth (in)	Mean Boundary Roughness (in)	Predominant Type of Boundary Roughness	Mean aRPD (in)	Mean of BAZ Maximum Depth (in)	Mean # of Subsurface Feeding Voids	Mean of Maximum Subsurface Feeding Void Depth (in)	Methane Presence	Benthic Type
L6-13	3.5	>4	7.1	0.7	Biological	0.8	6.7	1.0	5.1	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-14	3.2	>4 / 3 to 2	5.8	0.5	Biological	0.7	4.7	0	0	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-15	5	>4 / 3 to 2	5.7	0.6	Physical	1.0	4.6	0.7	3.6	Yes	Layered silty fine sand with worm tubes and/or burrows, occasional gravel
L6-16	3	4 to 3	2.7	0.6	Biological	0.5	1.2	0.3	1.5	Yes	Well sorted fine sand, shallow to medium aRPD
L6-17	5.8	>4 / 2 to 1	6.7	0.7	Biological	0.5	3.5	1.0	2.7	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-18	7	>4 / 3 to 2	7.8	0.6	Biological	0.8	7.4	0.3	2.4	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-19	3.3	>4 / 3 to 2	6.7	0.4	Biological	0.5	6.0	0.7	2.6	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-20	2.9	>4 / 3 to 2	7.1	0.5	Biological	0.6	6.3	0	0	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-21	5.8	>4	8.0	0.5	Biological	0.5	7.8	0	0	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
L6-22	5	>4	7.8	0.6	Biological	0.5	7.4	1.0	3.7	Yes	Organic silt/clay with evidence of methane, detritus, and worm burrows, occasional basal sand horizon
Max	26.6		8.7	1.6		1.0	8.1	1.0	5.1		
Min	2.0		0.0	0.2		0.2	0.8	0.0	0.2		
Mean	9.3		5.1	0.6		0.6	4.8	0.3	2.6		

Notes:

aRPD, Apparent redox potential discontinuity
Ind, Indeterminate

Modified from: Table 3-2 in *Report for the Sediment Profile Imaging Survey at the Griffin Island and Lock 6 Focus Areas of the Hudson River, Glens Falls, NY, October 2015*.
Prepared by Germano & Associates, Inc., February 2016.

Table 8
Summary of Supplemental Visual Assessment Field Observations
Off-Site Sediment Characterization Sampling
Former Ciba-Geigy Facility
Glens Falls, New York


EHS  Support <i>consider it done</i>			Supplemental Visual Assessment Form		Samplers: INSPIRE: Germano/Sturdivant EHS Support: Long		Client: Ashland Project: Glens Falls		Project #: C16262-2016-800							
Station ID	Date	Time	Appx. Grab Depth (in)	Appx. Sieving Interval (in)	Observed Taxa										Observations	
					Amphipods	Isopods	Chironomids	Bivalve - Mussel	Bivalve - Other	Oligochaete	Gastropods	Odonata	Sialidae			
L6_1	10/29/2015	SPI: 09:05 Grab: 11:00	0 - 9.5	0 - 3.1				•	•	•	•					Surface oxic layer ~1 cm thick; sediment fluidized at surface; small to large bivalves; detritus 1 large bivalve (mussel) in deep interval; high density of bivalves (mussels) at surface
				3.1 - 9.5					•							
L6_2	10/29/2015	SPI: 08:50 Grab: 10:45	0 - 9.8	0 - 3.1			•	•	•	•	•	•				Bivalves (mussels) dense; oligochaete tubes at surface; 7.5 - 10 mm oxic layer at surface; high water content in sediment (fluidized) at surface; sand at depth; wood debris at depth; small to large bivalves; small gastropods; detritus; no organisms observed in bottom sieving interval
				3.1 - 9.8												
L6_3	10/29/2015	SPI: 08:35 Grab 10:30	0 - 5.5	0 - 3.1			•	•	•			•				3-5 mm oxidized surface interval; bivalves (mussels) dense, silt/clay over rocks; sparse surface oligochaete tubes; deepest borrows to approximately 6 cm; bedrock fine detrital material; odonate nymph - gomphid; no organism observed in the 8-14 cm sieve interval; multiple grabs were attempted but recovery was poor due to coarse substrate
				3.1 - 5.5												
L6_4	10/29/2015	SPI: 08:15 grab 10:00	0 - 9.8	0 - 3.1	•		•	•	•	•	•	•				Large gomphid nymph (Odonata); burrow openings to 8 cm; sand at depth; 2 app Gastropoda; pebbles, wood fibers/detritus, and plant roots in bottom sieve interval; no organisms observed in bottom sieve interval
				3.1 - 9.8												

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Station ID	Date	Time	Appx. Grab Depth (in)	Appx. Sieving Interval (in)	Observed Taxa											Observations
					Amphipods	Isopods	Chironomids	Bivalve - Mussel	Bivalve - Other	Oligochaete	Gastropods	Odonata	Sialidae			
L6_5	10/29/2015	SPI: 08:00 grab: 09:30	0 - 4.7	0 - 3.1			●	●	●		●	●				SAV (eelgrass) at bottom of grab; surface oxidized layer approximately 3-5 mm thick; large gomphid nymph (Odonata); no distinct burrowing below 7 cm; root structures penetrate to bottom of grab; no organisms observed in the 8 - 12 cm sieve interval
				3.1 - 4.7												
L6_6	10/28/2015	SPI: 12:55 Grab: 16:45	0 - 9.5	0 - 3.1		●	●	●		●	●	●				7.5 mm oxic zone; BAZ to 15 cm based on visual observation in grab; oligochaete tubificids; detritus predominantly in bottom sieve interval
				3.1 - 9.5			●									
L6_7	10/28/2015	SPI: 12:35 Grab: 16:20	0 - 4.7	0 - 2.4			●									Dense filamentous algae throughout grab (refractory organic material); 3-4 mm redox layer; attempted sieve of surface; Chironomus only organism found after sieving top interval; no sieving attempted on bottom interval.
L6_11	10/28/2015	SPI: 11:45 Grab: 16:00	0 - 6.7	0 - 3.1			●			●	●					Predominantly silty sand; 2-3 mm oxidized surface interval; little biological activity observed below 5 cm; large rocks in grab; limited biomass observed in 0 - 8 cm sieved interval and no organisms observed in interval below 8 cm
				3.1 - 6.7												

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Station ID	Date	Time	Appx. Grab Depth (in)	Appx. Sieving Interval (in)	Observed Taxa											Observations
					Amphipods	Isopods	Chironomids	Bivalve - Mussel	Bivalve - Other	Oligochaete	Gastropods	Odonata	Sialidae			
L6_13	10/28/2015	SPI: 11:00 Grab: 14:40	0 - 9.5	0 - 3.1	●	●	●	●	●	●	●	●				Dense filamentous algae at surface of the grab sample; Approximately 5 mm oxic layer; approximately 9 cm bioturbation layer observed in grab; wood debris in both sieved intervals; tubificids observed but more limited than previous stations; no organisms observed in bottom sieved interval.
				3.1 - 9.5												
L6_14	10/28/2015	SPI: 10:45 Grab: 15:00	0 - 9.5	0 - 3.1	●		●				●		●			SAV (eelgrass) in surface interval; surface oxidized layer approximately 15 mm thick; dense gastropods in upper interval; coarse sand granules/wood debris in bottom sieved interval; no organisms identified in bottom interval.
				3.1 - 9.5												
L6_16	10/28/2015	SPI: 10:30 Grab: 1530	0 - 7.9	0 - 3.1	●		●	●			●	●	●			Firm sand under silt; bivalves (mussels) at surface; 5 mm oxidized surface interval; no organisms observed in bottom sieve interval
				3.1 - 7.9												
L6_19	10/28/2015	SPI: 09:35 Grab: 14:15	0 - 7.1	0 - 3.1	●		●		●	●	●		●			Tubes extend > 18 cm - observed extending from bottom of grab sampler; tubes at surface, but less dense than L6_22; approximately 2 cm surface interval re-worked by biota; small bivalves predominant organism observed in surface interval; small bivalve observed in lower sieved interval.
				3.1 - 7.1					●							

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Station ID	Date	Time	Appx. Grab Depth (in)	Appx. Sieving Interval (in)	Observed Taxa											Observations	
					Amphipods	Isopods	Chironomids	Bivalve - Mussel	Bivalve - Other	Oligochaete	Gastropods	Odonata	Sialidae				
L6_22	10/28/2015	SPI: 09:15 Grab: 13:40	0 - 7.1	0 - 3.1		●	●		●		●		●				Dense surface tubes observed; approximately 1 cm oxidized surface layer; approximately 13 cm tubificide (oligochaete) tubes; sediment degassing noted during deployment.
				3.1 - 7.1			●										
GI_1	10/29/2015 grab 10/30/15	SPI: 16:00 grab: 8:00	0 - 4.7	0 - 2.4				●	●								Surface washed out in 3rd attempt at grab; silty sand surface; high density unionid clam; cannot assess RPD or bioturbation due to wash out; clams and rocks in sieve; no orgs in bottom sample; hard bottom difficult to get clean grab - 3 attempts
				2.4 - 4.7													
GI_3	10/29/2015 grab 10/30/15	SPI: 15:10 grab 8:20	0 - 3.1	0 - 3.1				●	●								Similar to GI-1; clams not as dense as GI-1; surface oxidized 5 mm; no tubes surface suspension feeders; gravel and clams in sample; 1 photo; no bottom sample - penetration only about 8 cm with grab due to coarse grained bottom
				NA													
GI_6	10/29/2015 grab 0/30/15	SPI: 13:45 grab 8:35	0 - 2.75	0 - 2.75							●						5 - 7.5 mm oxidized surface interval; no obvious tubes at surface; primarily silt/clay at surface; bottom interval not sieved; plant debris/wood detritus predominant in surface interval; organisms epifaunal - primarily small gastropods.
				NA													

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Station ID	Date	Time	Appx. Grab Depth (in)	Appx. Sieving Interval (in)	Observed Taxa											Observations
					Amphipods	Isopods	Chironomids	Bivalve - Mussel	Bivalve - Other	Oligochaete	Gastropods	Odonata	Sialidae			
GI_8	10/29/2015 grab 10/30/15	SPI: 13:20 grab 8:50	0 - 10.2	0 - 3.1				●	●	●	●	●				Tubificid tubes; bivalves (mussels) at surface; substrate predominantly silty-fine sand w/ some debris (bricks); approximately 10 mm surface oxic layer; visual BAZ depth estimated at 10 mm; coarser sand at depth with graded coarse-to-fine sand to silt approaching surface; no organisms observed in the bottom sieved interval; only coarse sand gravel retained in bottom sieve.
				3.1 - 10.2												
GI_9	10/29/2015 grab 10/30/15	SPI 13:05 grab 09:00	Minimal recovery	NA			●	●								Multiple attempts at grab sample yielded minimal surficial sediment due to rocks in jaws; materiel recovered was silty-sand with oxidized surface; bivalves (mussels) at surface; picture of residual material that did not wash out of bucket; did not sieve recovered material.
				NA												
GI_12	10/29/2015 grab 10/30/15	SPI: 12:10 grab 09:10	0 - 8.3	0 - 3.1							●					Multiple attempts at grab samples failed due to wash out; recovered acceptable grab; silty medium-coarse sand; low density Gastropods; 7.5 -10 mm oxidized surface interval; poorly sorted sediment; no tubes at surface; clay at depth in grab; indeterminate depth of BAZ from grab due to wash out; no large macrofauna observed in either sieved interval.
				3.1 - 8.3												

Notes:

BAZ, Biologically active zone
 RPD, Reduction-oxidation potential discontinuity
 SAV, Submerged aquatic vegetation
 SPI, Sediment profile imaging
 cm, centimeter
 mm, millimeter